MAYURA

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NEWSLETTER

OF

BIRDWATCHER'S SOCIETY OF ANDHRA PRADESH

INSTRUCTIONS TO CONTRIBUTORS

Contributors of scientific articles and miscellaneous notes are requested to assist the editors by observing the following instructions.

1. Papers which have at the same time been offered for publications to other journals or periodicals, or have already been published elsewhere, should not be submitted.

2. Papers/articles pertaining to ornithology in Andhra Pradesh state or to bird species found in Andhra Pradesh state only, will be accepted.

3. The manuscript should be preferably typed (double spacing) on one side of a sheet only, and the sheets properly numbered.

4. All common names of birds, mammals, etc., should be followed by the scientific name the first time they are mentioned in the text. The scientific names should be underlined.

5. Trinomials refering to subspecies should only be used where identification has been authentically established by comparisons of specimens actually collected.

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7. Text figures, line drawings and maps should be in Indian Ink.

8. Reference to literature should be placed at the end of the paper, alphabetically arranged under the author's name, with the abridged titles of journals or periodicals underlined and titles of books not underlined. Thus:

   Choudhury, B.C. (1984):Habitat Survey Project of BSAP- a preliminary report. Mayura 5(4): 80-89.

9. Reference to literature in the text should be made by quoting the author's name and year of publication, thus : (Choudhury 1984).

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CONTENTS

ADDITIONS TO "A CHECKLIST OF BIRDS OF ANDHRA PRADESH"
By Siraj A. Taher & Aasheesh Pittie 1

OCCURRENCE OF CERTAIN BIRD SPECIES IN AND AROUND PULICAT BIRD SANCTUARY
By Prakash Rao & K.K. Mohapatra 6

WINTER MIGRANTS SEEN AT PULICAT BIRD SANCTUARY AND SRIHARIKOTA ISLAND DURING 1989-90 AND 1990-91 SEASONS
By K.K. Mohapatra & Prakash Rao 9

MALLARDS AND OTHER MYSTERIES - AN UPDATE ON THE BIRDS OF ICRISAT ASIA CENTER
By C. Tom Hash, Ajay Varadachary & Susan E. Moss 12

MIGRATORY STATUS, FREQUENCY OF SIGHTINGS AND FREQUENT HABITATS OF THE BIRDS OF ICRISAT ASIA CENTER
By C. Tom Hash & Mary E. Peacock. 16

A CASE FOR THE PROTECTION OF THE BAPATLA WETLANDS
By Koka Mrutyumjaya Rao 28

BIRDING AT NIZAMSAGAR, NIZAMABAD DISTRICT, ANDHRA PRADESH
By T. Ganesh & P. Kanniah 33

GREY PELICAN *PELECANUS PHILIPPENSIS* - OVER VIEW OF AN ENDANGERED SPECIES.
By S. Riyazuddin 39

A WEEK IN SRIHARIKOTA WITH THE BNHS BIRD RINGING TEAM
By Humayun Taher 45

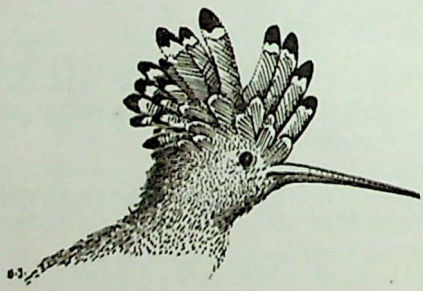
ADAPTATIONS IN NESTING SITES AND MATERIALS IN HOUSE CROW *CORVUS SPLENDENS* AND PARIAH KITE *MILVUS MIGRANS*
By Siraj Ahmed Taher 53

BIRDING IN MAHBUBNAGAR DISTRICT, ANDHRA PRADESH
By Humayun Taher 57

A TRIP TO ANANTAGIRI
By B. Dasarathi 60

MONOGAMY, POLYGAMY AND POLYANDRY - AN AVIAN PERSPECTIVE
By Vinay Totawar 63

OBITUARY - CAPT. N.S. TYABJI 69



HOOPOE *Upupa epops*

FOR PRIVATE CIRCULATION ONLY
Editors: Aasheesh Pittie, 8-2-545 Road No. 7, Banjara Hills, Hyderabad 500034
Siraj Taher, 2-B Atlas Apts., Road No. 10, Banjara Hills, Hyd., 500034
Illustrations: Sachin Jaltare and Richard Grimmett (*Birds of Nepal* by Carol & Tim Inskipp).

Articles to *Mayura* may be sent to the Honorary Secretary, BSAP, 6-3-912/1 Kapadia Lane, Somajiguda, Hyderabad 500482, or to the Editor.

ADDITIONS TO "A CHECKLIST OF BIRDS OF ANDHRA PRADESH"

SIRAJ A. TAHER & AASHEESH PITTIE

It is seven years since *A Checklist of Birds of Andhra Pradesh* was published (1989) and during this period a lot of changes have come about. The habitat of the state of Andhra Pradesh has changed and continues to change as various industrial and developmental activities grow to keep pace with the economic upsurge being witnessed all over India. Another change that is becoming quite noticeable is that birdwatchers all over are now more conscious of the presence of birds and better and more confident in their identification. This seems to be one of the important reasons for finding birds so far not reported from this part of the country. It is unlikely that the birds were not there - only that now there are more knowledgeable and capable people looking for them ! The degrada-tion of the habitat should, in fact, have reduced some of the already reported species - instead what one finds is quite an encouraging increase in the list.

One other factor that has contributed a great deal has been the Bombay Natural History Society's (BNHS) Bird Study Project, which was active in parts of Andhra Pradesh between 1989-1991 and the ongoing Asian Waterfowl Census, since 1987. Visits by members of the Oriental Bird Club (OBC) has also helped.

It is a pleasure to add 18 birds to the original list of 495, which makes it 513 birds ! Five new species are added making the total number of species to 451 in this state.

In preparing this 'addition' to the *Checklist*, the same criteria as adopted in the original list, has been followed, viz.,

1. All species reported in published literature, on birds of Andhra Pradesh and available to us, have been included. Further confirmation has been provided by the mist netting and ringing of birds by the BNHS team.
2. Personal records and those that have not been published but are fairly reliable have been scrutinised and included.

For several birds from the original list, the range has extended and the status better established now. This has been possible due to more observations and reports both by members of the Birdwatcher's Society of Andhra Pradesh and

several other birdwatchers. As this is outside the scope of this paper, it will covered separately in another issue of *Mayura*.

SPECIES	RANGE	STATUS
LESSER FRIGATE BIRD (31) *Fregata minor* Sight record from Sriharikota Island, Nellore district, on 29-7-1991 (Rao, P. & Mohapatra, K.K. 1994).	1	X
MALLARD (100) *Anas platyrhynchos* Sight record from ICRISAT Asia Centre, Patancheru, Medak district by Tom Hash (verbally), Ajay Varadachary & Susan Moss. Birds photographed by T. Hash. Also Hash, T. (1996).	3	M U
SPARROW-HAWK (147/148) *Accipiter nisus* Sight record from Masaipet, Nizamabad district by Col. R. Sparrow on 3-12-1913 (Ali, S. & Whistler, H. 1934).	3	
RUFOUSBELLIED HAWK-EAGLE (165) *Hieraaetus kienerii* Sight record from Tirumala Hills, Chittoor district by members of the BSAP. See also Taher, H. (1992, 1995). Kulkarni, M.S. (1995).	2	R? X
GRIFFON VULTURE (180,183) *Gyps fulvus* Noted at Mananur, Nelipaka, Utnoor and Hyderabad city environs (Ali, S. 1934) who mentions "This is one of the commonest vultures, probably even more so than the White-backed species." Sight record of A. Pittie from Bhongir, Nalgonda district, on 14-1-1993 and 16-1-1993.	3	LM? U
LARGE SAND PLOVER (374) *Charadrius leschenaulti* Sight records at Pullcat Lagoon, Nellore district during 1989-1991 season. See also Rao, P. & Mohapatra, K.K. (*Mayura* 1996. vol. 11).	1	M U
RINGED PLOVER (378) *Charadrius hiaticula* Sight record from Pulicat Lagoon, Nellore district, by Nigel Lindsey on 20-1-1991 (Robson, C. 1991). Also from here by BNHS team during 1990-91 season (Rao, P. & Mohapatra, K.K. 1996).	1	M U

SPECIES	RANGE	STATUS
KNOT (412) *Calidris canutus* Ringing record from Pulicat Lagoon, Nellore district, by BNHS team on 21-12-1990 (Rao. P. & Mohapatra, K.K. 1996).	1	M
EASTERN KNOT (413) *Calidris tenuirostris* Ringing record from Pulicat Lagoon, Nellore district, by BNHS team on 19-9-1990 (Rao, P. & Mohapatra, K.K. 1996).	1	M X
REDNECKED PHALAROPE (428) *Phalaropus lobatus* Ringing record from Pulicat Lagoon, Nellore district, by BNHS team on 21-9-1990 (Rao, P. & Mohapatra, K.K. 1996). Also sighted by Nigel Lindsey (Robson, C. 1991).	1	PM U
SLENDERBILLED GULL (456) *Larus genei* Sight record at Pulicat Lagoon, Nellore district by Nigel Lindsey (Robson, C. 1991) on 20-1-1991 and 21-1-1991.	1	M
BLACK TERN (459a) *Chlidonias niger* Ringing record from Pulicat Lagoon, Nellore district, by BNHS team on 12-10-1990 (Rao, P. & Mohapatra, K.K. 1996).	1	M X
COMMON TERN (465) *Sterna hirundo* Sight and ringing record from Pulicat Lagoon, Nellore district by BNHS team during 1989-90 season and on 22-10-1990 respectively. (Rao, P. & Mohapatra, K.K. 1996).	1	M U
PLAIN SAND MARTIN (912) *Riparia paludicola* Sight record at ICRISAT Asia Center, Patancheru, Medak district in March 1995. See also Hash, T. (1996).	3	
PHILIPPINE SHRIKE (950) *Lanius cristatus lucionensis* Sight and ringing record from Sriharikota Island, Nellore district by BNHS team on 14-4-1990 (Mohapatra, K.K. & Santharam, V. 1992).	1	
ASHY MINIVET (1089A) *Pericrocotus divaricatus*	2	

SPECIES	RANGE	STATUS
Sight record from Sriharikota Island, Nellore district on 21-9-1990 V. Santharam (1990).		
FAIRY BLUEBIRD (1109,1110) *Irena puella* Sight record from Talakona forest, Chittoor district on 28-3-1990, where it was netted and released (not ringed), by S. Taher and S.D. Ripley, S.A. Hussain, B. Bhushan, K.J. Rao.	2	
YELLOWBROWED BULBUL (1144) *Hypsipetes indicus* Sight record from Talakona, Bhakrapet, Tirumala Hills, all in Chittoor district, on 27-3-1990 and 28-3-1990 by S. Taher, S.D. Ripley, S.A. Hussain, B. Bhushan and K.J. Rao. Also at Mamandur forest, Chittoor district (Santharam, V. 1992).	2	R LM? X

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Rao, P. & Mohapatra, K.K. (1994): Occurrence of the Lesser Frigate Bird *Fregata minor* (Gmelin) in Andhra Pradesh. *JBNHS* 90(2): 284.

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Address for communication:

Siraj A. Taher, 2-B Atlas Apartments, Road No. 10 Banjara Hiills, Hyderabad 500 034.

Aasheesh Pittie, 8-2-545 Road No. 7, Banjara Hills, Hyderabad 500 034.

RUFOUSBELLIED HAWK-EAGLE *Hieraaetus kienerii*

OCCURRENCE OF CERTAIN BIRD SPECIES IN AND AROUND PULICAT BIRD SANCTUARY

PRAKASH RAO & K.K. MOHAPATRA

Pulicat Bird Sanctuary in south coastal Andhra Pradesh is a major wintering ground for a variety of migratory waterfowl on India's eastern seaboard. The sanctuary spread over an area of about 450 sq. kms. is a vast salt water lagoon which is heavily dependent on the north-east monsoon for its water regime.

The Bombay Natural History Society (BNHS) has been carrying out studies on bird migration since November 1989 under its Bird Migration Project headed by the Senior Scientist of the project Mr. S.A. Hussain. The study so far has revealed that the sanctuary is of considerable importance to both wintering and transient waterfowl populations. We have so far recorded 76 species of waterfowl at the sanctuary of which 57 (75%) are migrants and 19 (25%) are residents. The major waterfowl groups represented at the sanctuary include Pelecanidae, Ardeidae, Ciconiidae, Phoenicopteridae, Anatidae, Charadriidae and Laridae.

Shorebirds or waders constitute an important component of the sanctuary's migrant avifauna. Vast numbers winter on the mudflats of the sanctuary every year. Some of the major species seen here include Little Stint *Calidris minuta*, Curlew-sandpiper *Calidris testacea*, Kentish Plover *Charadrius alexandrinus*, Lesser Sand Plover *Charadrius mongolus*, Little Ringed Plover *Charadrius dubius*, Marsh Sandpiper *Tringa stagnatilis*, Greenshank *Tringa nebularia*, Ruff *Philomachus pugnax*, Golden Plover *Pluvialis dominica* and Blackwinged Stilt *Himantopus himantopus*. Some other interesting waders which are seen here are Avocet *Recurvirostra avosetta* (500 + recorded during the 1989-90 season), Terek Sandpiper *Tringa terek*, Spotted Redshank *Tringa erythropus* and Blacktailed Godwit *Limosa limosa*.

The BNHS bird migration project has so far ringed 50 species of waterfowl from the sanctuary during the seasons 1989-90 and 1990-91. The current report looks at some uncommon bird species of the sanctuary with reference to the Checklist of Birds of Andhra Pradesh (Taher and Pittie, 1989). All the bird species described below have either been ringed or sight recorded in and around Pulicat Bird Sanctuary.

In the following list, M=migrant, PM=passage migrant, R=rare, UC=uncommon.

01. RINGED PLOVER *Charadrius hiaticula* M UC
Several individuals sight recorded from Pulicat during the 1990-91 season. The species is by no means common but tends to get overlooked amongst Little Ringed Plover from which it can be differentiated by the presence of a white wing bar when the bird is in flight.

02. LARGE SAND PLOVER *Charadrius leschenaultii* M UC
Solitary individuals recorded from the mudflats of the sanctuary mostly along the SHAR-Sulurpet road. The individuals were seen amongst a flock of Kentish Plovers and Little Ringed Plovers. Not mentioned in the Checklist, though recorded in Andhra Pradesh (Ali & Ripley, 1987).

03. KNOT *Calidris canutus* M R
Very few records exist for the species on the Eastern coasts of India (Ali & Ripley, 1987). A solitary individual was ringed at Pulicat (Ring No. AB-129515) on 21-12-1990.

04. EASTERN KNOT *Calidris tenuirostris* M R
According to Ali & Ripley (1987) there are isolated records for the species from Assam, Calcutta and Madras. This species was ringed from Pulicat (Ring No.. B-57777) on 19-9-1990. Apart from the solitary bird ringed there was one other sight record for the species from the sanctuary.

05. REDNECKED PHALAROPE *Phalaropus lobatus* PM R
Six individuals were ringed from Pulicat mudflats on the morning of 21-9-1990. The date of occurrence suggests that the species may have been on passage further south. The species was not recorded again from the sanctuary during the 1990-91 season.

06. BLACK TERN *Chlidonias niger* M R
Hitherto very few records exist for the species in the Indian sub-continent (Ali & Ripley, 1987), but recently a few individuals were ringed in 1988 by the BNHS at Point Calimere in Tamil Nadu. The solitary individual ringed from Pulicat (Ring No. AB-135293) was

caught amongst a flock of Whiskered Terns *Chlidonias hybrida* on 12-10-1990.

07. COMMON TERN *Sterna hirundo* M UC
Less frequently seen in relation to some of the other tern species. Several individuals sight recorded during the 1989-90 season, while 7 individuals ringed from Pulicat (Ring Nos. AB-135811 to 135817) on 22-10-1990.

It may be mentioned here that none of these species are recorded in Andhra Pradesh as per the Checklist (Taher & Pittie, 1989) and hence constitute additions to the Andhra Pradesh bird list. More detailed study would definitely reveal other interesting species in due course. The BNHS is currently preparing a checklist for the birds of Pulicat Sanctuary.

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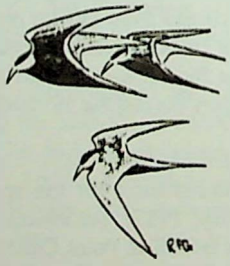
Address for correspondence:

Prakash Rao, Senior Programme Officer, WWF-India Secretariat, Pirojsha Godrej National Conservation Centre, 172-B Lodi Estate, New Delhi 110003.

K.K. Mohapatra, Bombay Natural History Society, Hornibll House, Dr. Salim Ali Chowk, Shaheed Bhagat Singh Road, Mumbai 400023.



BLACKBELLIED TERN *Sterna acutlcauda*

WINTER MIGRANTS SEEN AT PULICAT BIRD SANCTUARY AND SRIHARIKOTA ISLAND DURING 1989-90 AND 1990-91 SEASONS

K.K. MOHAPATRA & PRAKASH RAO

The south coastal region of Andhra Pradesh harbours two vital and ecologically important habitat zones in Pulicat Bird Sanctuary and Sriharikota Island. While Pulicat is a vast brackish water lagoon spread over an area of about 450 sq. kms. the adjoining Sriharikota Island is a prime example of a protected tropical dry evergreen forest unlike other similar regions where the habitat is disturbed.

Together the two regions have quite a few palaearctic winter migrants arriving every year. More than 200 species of birds have so far been recorded from the two regions. The Bombay Natural History Society (BNHS) Bird Migration Project which is currently studying the avifauna of both Pulicat and Sriharikota Island on a long term basis has so far recorded 76 species of waterfowl from Pulicat and 197 species of birds from Sriharikota Island. The following table gives a list of some winter migrants occurring at Pulicat and Sriharikota Island along with the sighting dates (first seen and last seen) during the seasons 1989-90 and 1990-91.

	Species	First Record*	Last Record*
01.	PINTAIL *Anas acuta*	31-10-90	22-03-91
02.	COMMON TEAL *Anas crecca*	31-10-90	05-03-91
03.	WIGEON *Anas penelope*	10-11-89	12-02-91
04.	GARGANEY *Anas querquedula*	26-09-90	22-03-91
05.	SHOVELLER *Anas clypeata*	31-10-90	12-02-91
06.	PALE HARRIER *Circus macrourus*	10-09-90	—
07.	MARSH HARRIER *Circus aeruginosus*	30-08-90	06-03-91
08.	OSPREY *Pandion haliaetus*	20-08-90	10-04-91
09.	PEREGRINE FALCON *Falco peregrinus*	03-11-90	—
10.	KESTREL *Falco tinnunculus*	30-10-90	—
11.	COOT *Fulica atra*	30-08-90	22-06-90
12.	GREY PLOVER *Pluvialis squatarola*	17-09-90	11-05-91
13.	GOLDEN PLOVER *P. dominica*	17-09-90	11-05-91
14.	LARGE SAND PLOVER *Charadrius leschenaultii*	17-09-90	—
15.	LITTLE RINGED PLOVER *C. dubius*	17-08-90	06-03-91
16.	KENTISH PLOVER *C. alexandrinus*	17-08-90	02-06-90
17.	LESSER SAND PLOVER *C. mongolus*	18-08-90	05-04-91

	Species	First Record*	Last Record*
18.	WHIMBREL *Numenius phaeopus*	13-08-90	05-03-91
19.	CURLEW *N. arquata*	17-09-90	04-04-91
20.	BLACKTAILED GODWIT *Limosa limosa*	—	24-04-91
21.	SPOTTED REDSHANK *Tringa erythropus*	—	27-04-91
22.	REDSHANK *T. totanus*	17-08-90	05-04-91
23.	MARSH SANDPIPER *T. stagnatilis*	17-08-90	11-05-91
24.	GREENSHANK *T. nebularia*	17-08-90	11-04-91
25.	SPOTTED SANDPIPER *T. glareola*	23-10-90	11-05-91
26.	COMMON SANDPIPER *T. hypoleucos*	23-08-90	06-03-91
27.	LITTLE STINT *Calidris minuta*	17-08-90	12-05-91
28.	TEMMINCK'S STINT *C. temminckii*	10-11-89	11-04-91
29.	CURLEW SANDPIPER *C. testacea*	12-10-90	23-01-91
30.	RUFF *Philomachus pugnax*	23-08-90	06-03-91
31.	REDNECKED PHALAROPE *Phalaropus lobatus* @	21-09-90	—
32.	BLACKWINGED STILT *Himantopus himantopus*	31-10-90	11-05-91
33.	COLLARED PRATINCOLE *Glareola pratincola maldivarum* @	22-09-90	—
34.	BROWNHEADED GULL *Larus brunnicephalus*	30-10-90	12-05-90
35.	BLACKHEADED GULL *L. ridibundus*	—	11-02-91
36.	WHISKERED TERN *Chlidonias hybrida*	13-08-90	23-04-90
37.	GULLBILLED TERN *Gelochelidon nilotica*	13-08-90	22-06-90
38.	CASPIAN TERN *Hydroprogne caspia*	30-10-90	22-06-90
39.	COMMON TERN *Sterna hirundo*	22-10-90	—
40.	LITTLE TERN *S. albifrons*	13-08-90	10-05-90
41.	SMALL CUCKOO *Cuculus poioicephalus* @	—	10-05-90
42.	BLACKCAPPED KINGFISHER *Halcyon pileata*	02-1'-90	05-03-91
43.	INDIAN PITTA *Pitta brachyura*	24-10-90	04-05-90
44.	COMMON SWALLOW *Hirundo rustica*	11-08-90	15-05-91
45.	BROWN SHRIKE *Lanius cristatus*	17-09-90	10-05-90
46.	GOLDEN ORIOLE *Oriolus oriolus*	22-12-89	22-03-91
47.	BROWN FLYCATCHER *Muscicapa latirostris*	22-11-90	20-03-91
48.	BROWNBREASTED FLYCATCHER *M. muttui* @	—	22-03-91
49.	REDBREASTED FLYCATCHER *M. parva albicilla* @	—	12-03-91
50.	BLUETHROATED FLYCATCHER *M. rubeculoides*	24-10-90	27-02-91
51.	THICKBILLED WARBLER *Acrocephalus aedon*	22-12-89	—
52.	BLYTH'S REED WARBLER *A. dumetorum*	20-10-90	04-05-90
53.	LESSER WHITETHROAT *Sylvia curruca*	13-10-90	21-03-90
54.	LARGEBILLED LEAF WARBLER	—	15-05-91

	Species	First Record*	Last Record*
	Phylloscopus magnirostris @		
55.	DULL GREEN LEAF WARBLER *P. trochiloides*	05-11-90	29-04-91
56.	BLUE CHAT *Erithacus brunneus* @	—	03-04-90
57.	BLACK REDSTART *Phoenicurus ochruros*	06-11-90	27-02-91
58.	ORANGEHEADED GROUND THRUSH *Zoothera citrina citrina*	23-11-90	23-02-91
59.	WHITETHROATED GROUND THRUSH *Z. c. cyanotus*	07-11-90	13-03-91
60.	FOREST WAGTAIL *Motacilla indica*	11-09-90	10-05-90

Legend: @ = Passage migrant, * = Ringed or sighted, ' --- ' = No data available.

The current list of sixty species presents a fair picture of the migrant arrivals and departures in Pulicat and Sriharikota Island. The list is by no means complete as many species are omitted due to no data being available. While land bird migrants show a distinct pattern in their timing or return migration, aquatic birds tend to show variation in their movements mainly due to the prevailing water regime of the sanctuary.

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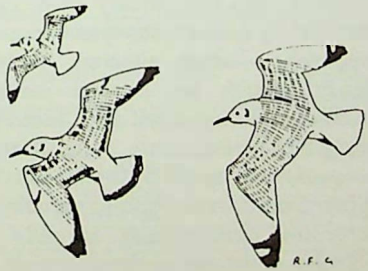
Address for correspondence:
K.K. Mohapatra, Bombay Natural History Society, Hornibll House, Dr. Salim Ali Chowk, Shaheed Bhagat Singh Road, Mumbai 400023.
Prakash Rao, Senior Programme Officer, WWF-India Secretariat, Pirojsha Godrej National Conservation Centre, 172-B Lodi Estate, New Delhi 110003.



BROWNHEADED GULL *Larus brunnicephalus*

MALLARDS AND OTHER MYSTERIES - AN UPDATE ON THE BIRDS OF ICRISAT ASIA CENTER

C. TOM HASH, AJAY VARADACHARY & SUSAN E. MOSS

Since preparation of an earlier manuscript (Peacock 1994) describing the birds of the ICRISAT Campus, the name of the site has changed to ICRISAT Asia Center while the feathered fauna of this outstanding birding venue have continued to surprise viewers with their diversity. Common Peafowl *Pavo cristatus* have become relatively common breeding residents, as have Black Ibis *Pseudibis papillosa*. Several infrequent visitors have appeared again after long absences. Highlights include a Darter *Anhinga rufa* in December 1994; a single Lesser Adjutant Stork *Leptoptilos javanicus* in January 1992 and 1993, and May 1994; Greater Flamingos *Phoenicopterus roseus* in June 1993; Barheaded Geese *Anser indicus* in December 1992, February and December 1995; Barn Owl *Tyto alba* in May 1996; and Shorteared Owls *Asio flammeus* in January-February 1996.

New visitors and residents have also been observed, the most prominent of which is the Great Cormorant *Phalacrocorax carbo* that was first seen on the campus in February 1995, arrived in larger numbers to feed on fish in drying irrigation tanks in May, and subsequently bred successfully here during the 1995 rainy season.

New species identified on the campus by two or more observers (or from photographs taken by a single observer) include Mallard *Anas platyrhynchos* - six birds during December 1993-February 1994, and single birds in January and March 1995; Redcrested Pochard *Netta rufina* in April 1991, December 1992, January and December 1993 and January 1996; Laggar Falcon *Falco biarmicus* in March 1995 and on several subsequent occasions; Blackbreasted Quail *Coturnix coromandelica*, which although likely resident is only occasionally seen clearly enough for positive identification; Oriental Pratincole *Glareola pratincola* during April-July, breeding in barren fields and dry tank beds during this period; Little Tern *Sterna albifrons* in May 1994; Wryneck *Jynx torquilla* in May 1995; Indian Pitta *Pitta brachyura* in May 1989 and 1993; Plain Sand Martin *Riparia paludicola* in March 1995; Small Minivet *Pericrocotus cinnamomeus* in July 1995; Peninsular Blackheaded Cuckoo-Shrike *Coracina melanoptera* in April-June 1991; Whitebrowed Bulbul *Pycnonotus luteolus* in the wooded area adjacent to quarantine plots in February-June 1995; and Yellow-eyed Babbler

Chrysomma sinense in August 1993 and 1994, and May-July 1995. We believe that the Mallard and Plain Sand Martin are reported here from Andhra Pradesh for the first time.

Species that have been added to the ICRISAT Asia Center list of possibilities that remain to be confirmed include Pacific Golden Plover *Pluvialis fulva*, Whitetailed Lapwing *Vanellus leucurus*, Herring Gull *Larus argentatus*, Great Blackheaded Gull *Larus ichthyaetus*, Blueheaded Rock Thrush *Monticola cinclorhynchus*, Ruddy Crake *Porzana fusca*, Bluebreasted Banded Rail *Rallus striatus* and Yellow Bittern *Ixobrychus sinensis*.

Several of the new confirmed and unconfirmed species for this site have been seen on a single occasion, often while apparently on migration during the peak of the hot season in May just prior to the onset of the monsoon. Sightings of unidentified sandgrouse (Pteroclidae), quail (Phasianidae) and cuckoos (Cuculidae) suggest that ample opportunities remain to expand the species list for this site. Further details on the birds of ICRISAT Asia Center are being assembled by the senior author and will be the subject of a future article.

NEW VISITORS AND RESIDENT BIRDS

Common Name	Scientific Name	Period seen and other remarks
Great Cormorant	*Phalacrocorax carbo*	First seen in Feb. 1995, arrived in larger numbers to feed on fish in drying irrigation tanks in May, and stayed on breeding successfully during the 1995 rainy season; now breeding resident.
Mallard	*Anas platyrhynchos*	Six during Dec. 1993-Feb 1994, and one in Jan and Mar 1995.
Redcrested Pochard	*Netta rufina*	Apr 1991, Dec 1992, Jan 1993, Dec 1993 and Jan 1996.
Laggar Falcon	*Falco biarmicus*	Mar 1995 and several subsequent occasions.
Blackbreasted Quail	*Coturnix coromandelica*	Likely resident but only occasionally seen clearly enough for positive identification.
Oriental Pratincole	*Glareola pratincola*	Apr-Jul almost annually since 1991, breeding in barren fields and dry tank beds.
Little Tern	*Sterna albifrons*	May 1994.
Wryneck	*Jynx torquilla*	May 1995.
Indian Pitta	*Pitta brachyura*	May 1989 and 1993.
Plain Sand Martin	*Riparia paludicola*	Mar 1995.
Small Minivet	*Pericrocotus cinnamomeus*	Jul 1995.
Blackheaded Cuckoo-Shrike	*Coracina melanoptera*	Apr-Jun 1995.

Common Name	Scientific Name	Period seen and other remarks
Whitebrowed Bulbul	*Pycnonotus luteolus*	Feb-Jun 1995
Yellow-eyed Babbler	*Chrysomma sinense*	Aug 1993 and 1994 and May-Jul 1995.

INFREQUENT VISITORS AND RARELY SEEN RESIDENTS

Common Name	Scientific Name	Period Seen
Darter	*Anhinga rufa*	Dec 1994
Chestnut Bittern	*Ixobrychus cinnamomeus*	Jun-Jul 1991
Lesser Adjutant Stork	*Leptoptilos javanicus*	Jan 1992 & 1993, May 1994
Greater Flamingo	*Phoenicopterus roseus*	Jun 1993
Barheaded Goose	*Anser indicus*	Dec 1992, Feb & Dec 1995
Gadwall	*Anas strepera*	Apr 1993
Wigeon	*Anas penelope*	Oct 1992, Dec 1995
White-eyed Pochard	*Aythya nyroca*	Feb-Mar 1992
Pied Harrier	*Circus melanoleucos*	Feb 1992, Jan-Feb 1994
Whitebreasted Waterhen	*Amaurornis phoenicurus*	Jan 1994, Mar, Apr & Jun 1995
Painted Snipe	*Rostratula benghalensis*	Mar 1991, May 1993 & 1994, Jun 1995 (including chicks)
Stone Curlew	*Burhinus oedicnemus*	May 1994
Small Greenbilled Malkoha	*Rhopodytes viridirostris*	May 1991, Mar 1994, Feb 1995
Barn Owl	*Tyto alba*	May 1996
Shorteared Owl	*Asio flammeus*	Jan-Feb 1996
Common Iora	*Aegithina tiphia*	Feb 1992
Paradise Flycatcher	*Terpsiphone paradisi*	Apr 1991, 1993, 1995 & May 1992
Blackheaded Bunting	*Emberiza melanocephala*	Dec 1991, Jan 1993
Redheaded Bunting	*Emberiza bruniceps*	Jan 1993, Dec 1994

POSSIBLE VISITORS AND RESIDENTS AWAITING CONFIRMATION

Common Name	Scientific Name	Period seen
Pacific Golden Plover	*Pluvialis fulva*	May 1994
Whitetailed Lapwing	*Vanellus leucurus*	Sep 1991
Herring Gull	*Larus argentatus*	May 1994
Great Blackheaded Gull	*Larus ichthyaetus*	May 1994
Blueheaded Rock Thrush	*Monticola cinclorhynchus*	Oct 1991
Ruddy Crake	*Porzana fusca*	Jun 1995
Bluebreasted Banded Rail	*Rallus striatus*	Aug 1993 & 1994
Yellow Bittern	*Ixobrychus sinensis*	Jun 1992, Aug 1995

Address for correspondence:
ICRISAT Asia Center, Patancheru P.O., Andhra Pradesh 502324, India.

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The authors wish to express their thanks to the many past and present residents of, and visitors to, ICRISAT Asia Center who have helped us to continually update the site list, and to Mary E. Peacock for her continuing support.

SHORTEARED OWL *Asio flammeus*

MIGRATORY STATUS, FREQUENCY OF SIGHTINGS AND FREQUENT HABITATS OF THE BIRDS OF ICRISAT ASIA CENTER

C. TOM HASH & MARY E. PEACOCK

During the period 1980-1995, some 230 species of birds have been sighted at ICRISAT Asia Center, near Patancheru in Medak district, Andhra Pradesh (Peacock, 1994; Hash, *et al.*, 1996). The site check list is here updated and annotated regarding the probable migration status, frequency of sightings, and frequent habitats of each species based on the personal observations of the senior author during the periods March 1986-June 1988; February-March 1989 and January 1991-December 1995. First, observations for each month (zero to five periods of one to five hours each) were summarized within and across years. Seasonal occurrence of each bird species positively identified was then classified into arbitrary categories, defined below, roughly following Taher and Pittie (1989). Abbreviations used in the annotations for migratory status, frequency of sightings, and frequent habitats are as follows:

LEGEND

Habitats:- BA = Black regrowth area ; BI = Black ICRISAT Lake fields ; BM = Black Manmool fields ; BP = Black precision fields ; BR = Black rainfed fields ; BS = Black saline fields ; BU = Black unsprayed fields ; CL = Campus lake ; IL = ICRISAT lake ; OF = Open fields (not standing crops) ; PL = Power-lines ; PM = Patancheru tank, Patancheru marsh and adjacent settling ponds ; PQ = Post-entry quarantine isolation area and surrounding trees ; RF = Red precision fields ; RL = Red lake fields ; RN = Red lake north ; RP = Rice paddies ; RR = Red regrowth area ; RS = Red lake south and adjacent settling ponds.

Migratory Status:- Br = Breeding, observed at nest or as fledglings ; LM = Local migrant ; M = Migrant - winter visitor ; Re = Resident, observed in (nearly) every month of the year.

Frequency of sightings permiting positive identification:-

C = Common - > 35 months since 1986
O = Occasional - > 20 months since 1986
U = Uncommon - > 06 months since 1986
R = Rare < 05 months since 1986

BIRD CHECKLIST FOR ICRISAT ASIA CENTER, PATANCHERU, ANDHRA PRADESH, INDIA, 1980-1995

(Collated by M.E. Peacock and C.T. Hash, December 1995)

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
5	DABCHICK *Podiceps ruficollis*	RS	Year round	Br,Re,O
26	LARGE CORMORANT *Phalacrocorax carbo*	RN	Feb, Jun-Dec	Br,Re,U
27	INDIAN SHAG *P. fuscicollis*			
28	LITTLE CORMORANT *P. niger*	CL, IL, PM, RS	Sep-Jul	Br,Re,C
29	DARTER *Anhinga rufa*	CL/PM	Dec	R
36	GREY HERON *Ardea cinerea*	CL, IL, PM, RN, RS	Year round	Br,Re,C
37	PURPLE HERON *A. purpurea*	CL, IL, PM, RN, RS	Year round	Re,C
38	GREEN HERON *Butorides striatus*			
42	POND HERON *Ardeola grayii*	CL, IL, PM, RN, RS, RP	Year round	Re,C
44	CATTLE EGRET *Bubulcus ibis*	CL, IL, OF, PM, RN, RS	Year round	Re,C
46	LARGE EGRET *Egretta (Ardea) alba*	CL, IL, PM, RN, RS	Year round	Re,C
47/48	MEDIAN EGRET *E. intermedia*	CL, IL, PM, RN, RS	Aug-Jun	Re,C
49	LITTLE EGRET *E. garzetta*	CL, IL, PM, RN, RS	Year round	Re,C
50	INDIAN REEF HERON *E. gularis*			
52	NIGHT HERON *Nycticorax nycticorax*	CL, RS, PQ	Jan-Sep, Nov	Re,O
56	CHESTNUT BITTERN *Ixobrychus cinnamomeus*	PM	Jun-Jul	R
60	PAINTED STORK *Mycteria leucocephala*	IL, RN, RS	Dec-Jul, Sep	LM?,U
61	OPENBILL STORK *Anastomus oscitans*	IL, RS, RP	Dec-Aug, Oct	LM?,O
62	WHITENECKED STORK *Ciconia episcopus*	IL, RN, RS, RP	Nov-Jun	M,O
63	WHITE STORK *C. ciconia*			
65	BLACKNECKED STORK *Ephippiorhynchus asiaticus*			
68	LESSER ADJUTANT	IL, RP	Jan, May	R

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
	STORK *Leptoptilos javanicus*			
69	WHITE IBIS *Threskiornis aethiopica*	CL, IL, PM, RS, RP	Oct-Jul	LM?,O
70	BLACK IBIS *Pseudibis papillosa*	CL, IL, PM, RN, RS, RP	Year round	Br,Re,O
71	GLOSSY IBIS *Plegadis falcinellus*	CL, IL, PM, RS, RP	Dec-May	M,U
72	SPOONBILL *Platalea leucorodia*	IL, RS	Jan-Jun	M,U
73	GREATER FLAMINGO *Phoenicopterus roseus*	IL		R
82	BARHEADED GOOSE *Anser indicus*	RS	Feb, Dec	M,R
88	LESSER WHISTLING TEAL *Dendrocygna javanica*	CL, PM, RS	Year round	Br,Re,C
90	BRAHMINY DUCK *Tadorna ferruginea*	RN, RS	Nov-May	M,O
93	PINTAIL *Anas acuta*	CL, IL, RN, RS	Oct-Jun	M,O
94	COMMON TEAL *A. crecca*	RS	Dec-Apr	M,U
97	SPOTBILLED DUCK *A. poecilorhyncha*	CL, IL, PM, RN, RS, RP	Year round	Br,Re,C
100	MALLARD *A. platyrhynchos*	RS	Dec-Mar	M,R
101	GADWAL *A. strepera*			M,R
103	WIGEON *A. penelope*		Mar, Oct	M,R
104	GARGANEY *A. querquedula*	CL, IL, PM, RN, RS	Nov-May	M,O
105	SHOVELLER *A. clypeata*	CL, IL, PM, RN, RS	Oct-May	M,O
107	REDCRESTED POCHARD *Netta rufina*	RS	Dec-Jan, May	M,R
108	COMMON POCHARD *Aythya ferina*	CL, IL, RS	Nov-Mar	M,U
109	WHITE-EYED POCHARD *A. nyroca*	RS	Feb-Mar	M,R
111	TUFTED POCHARD *A. fuligula*			M
114	COTTON TEAL *Nettapus coromandelianus*	CL, IL, RS	Feb-Jul, Nov	M,U
115	COMB DUCK *Sarkidiornis melanotos*	CL, IL, RS, RP, RN	Oct-Jun	M,O
124	BLACKWINGED KITE *Elanus caeruleus*	PL & trees	Year round	Re,C
133	PARIAH KITE *Milvus migrans govinda*	Manmool Dump	Year round	Br,Re,C
134	BLACKEARED KITE *M. m. lineatus*	Manmool Dump	Dec-May, Jul-Sep ??	LM?,U

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
135	BRAHMINY KITE *Haliastur indus*		Jan-Mar, May, Aug	LM?,U
138	SHIKRA *Accipiter badius*	Campus, PQ	Jan-Mar, May, Jul, Sep-Nov	U
153	LONGLEGGED BUZZARD *Buteo rufinus*			
157	WHITE-EYED BUZZARD *Butastur teesa*	BR & BI fields	Jan, Mar, Jun	U
168	TAWNY EAGLE *Aquila rapax vindhiana*	RP	Nov-Sep	O
170	GREATER SPOTTED EAGLE *A. clanga*	RP	Nov-Mar	U
171	LESSER SPOTTED EAGLE *A. pomarina*			
182	LONGBILLED VULTURE *Gyps fulvus*		Jan, Feb, Apr	R
185	WHITEBACKED VULTURE *G. bengalensis*		Dec-Apr, Jun	U
186/187	EGYPTIAN VULTURE *Neophron percnopterus*		Jan-Jun, Sep, Oct	U
189	HEN HARRIER *Circus cyaneus*		?	
190	PALLID HARRIER *C. macrourus*	OF	Oct-Mar	M,U
191	MONTAGU'S HARRIER *C. pygargus*	OF	Oct-Mar	M,U
192	PIED HARRIER *C. melanoleucos*	OF	Jan-Feb	M,R
193	MARSH HARRIER *C. aeruginosus*	Near water	Sep-May, Jul	M,C
195	SHORT-TOED EAGLE *Circaetus gallicus*		Feb-May, Aug,Nov-Dec	LM?,U
203	OSPREY *Pandion haliaetus*			
208	LAGGAR FALCON *Falco biarmicus jugger*	Red precision fields	Mar'95	R
209-211	PEREGRINE FALCON *F. peregrinus*			R
219	REDHEADED MERLIN *F. chicquera*	Palm trees	May, Jun, Aug	LM?,U
222	KESTREL *F. tinnunculus*	OF	Oct-Apr	M,O
241	PAINTED PARTRIDGE *Francolinus pictus*	Orchard, PQ	Jan,Mar,May, Jun-Jul,Sep	Re?,U
246	GREY PARTRIDGE *F. pondicerianus*	Fields & brush	Year round	Br,Re,C
252	RAIN QUAIL *Coturnix coromandelica*		May-Aug, Dec	
311	COMMON PEAFOWL	PQ	Year round	Br,Re,C

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
	Pavo cristatus			
326	DEMOISELLE CRANE *Anthropoides virgo*	IL		R
337	BAILLON'S CRAKE *Porzana pusilla*		PM	R
342	BROWN CRAKE *Amaurornis bicolor*	PM, Main drain bridge	Jan, Mar-Aug, Nov	Re,U
343/344	WHITEBREASTED WATERHEN *A. phoenicurus*	CL, PQ	Dec-Jan, Mar-Apr, Jun, Aug	Br?,Re,U
346	WATERCOCK *Gallicrex cinerea*			R
347	INDIAN MOORHEN *Gallinula chloropus*	CL, PM	Nov-Jun, Sep	Br,O
349	PURPLE MOORHEN *Porphyrio porphyrio*	CL, IL, PM, RS, RP	Year round	Br,Re,C
350	COOT *Fulica atra*	CL, IL, PM, RS	Year round	Br,Re,C
358	BRONZEWINGED JACANA *Metopidius indicus*	IL, PM, RS	Oct-Jul	Re?,O
359	PHEASANT-TAILED JACANA *Hydrophasianus chirurgus*	PM, RS	Sep-Jul	Re?,O
366	REDWATTLED LAPWING *Vanellus indicus*	OF & near water	Resident	Br,Re,C
370	YELLOW-WATTLED LAPWING *V. malabaricus*	Dry OF	Feb-Mar, May-Aug,Nov	Br,U
371	GREY PLOVER *Pluvialis squatarola*			
379/380	LITTLE RINGED PLOVER *Charadrius dubius*	Mud flats near water	Oct-May	M,O
381	KENTISH PLOVER *C. alexandrinus*			
388	CURLEW *Numenius arquata*			
389	BLACKTAILED GODWIT *Limosa limosa*	RS, RP	Dec-Mar	M,U
392	SPOTTED REDSHANK *Tringa erythropus*	IL, RN, RS, RP	Oct-May	M,U
393	REDSHANK *T. totanus*			
395	MARSH SANDPIPER *T. stagnatilis*	RP	Dec-Mar	M,U
396	GREENSHANK *T. nebularia*	RN, RS, RP	Oct-Apr	M,U

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
397	GREEN SANDPIPER *T. ochropus*	RP		M
398	WOOD SANDPIPER *T. glareola*	RP	Oct-May,Jul-Aug	Re?,O
401	COMMON SANDPIPER *T. hypoleucos*	RP	Oct-Apr	M,O
409	FANTAIL SNIPE *Gallinago gallinago*	PM, RP	Oct-Apr	M?,O
410	JACK SNIPE *G. minima*	PM	Dec	R
416	LITTLE STINT *Calidris minuta*	RP	Jan-Mar, May, Oct	M,U
417	TEMMINCK'S STINT *C. temminckii*		Jan-Apr	M,R
426	RUFF *Philomachus pugnax*	RN, RS, RP	Nov-Apr	M,U
429	PAINTED SNIPE *Rostratula benghalensis*	PM, RP	Mar, May-Jul	Br,LM?,U
430	BLACKWINGED STILT *Himantopus himantopus*	PM, RN, RS, RP	Sep-Jun	M,C
436	STONE CURLEW *Burhinus oedicnemus*	Mango orchard	May	R
440	INDIAN COURSER *Cursorius coromandelicus*	Dry OF	Feb-Jun, Dec	LM?,U
442/443	COLLARED PRATINCOLE *Glareola pratincola*	OF & mud flats	Apr-Jul	Br,LM,U
454	BROWNHEADED GULL *Larus brunnicephalus*			U
455	BLACKHEADED GULL *L. ridibundus*			U
458	WHISKERED TERN *Chlidonias hybrida*			U
463	INDIAN RIVER TERN *Sterna aurantia*	IL, RS	Mar-May, Aug, Dec	Br,U
475	LITTLE TERN *Sterna albifrons*	IL	May	R
504	YELLOWLEGGED GREEN PIGEON *Treron phoenicoptera chlorigaster*	Banyan tree in RL fields	Mar-Aug	R
517	BLUE ROCK PIGEON *Columba livia*	OF, power lines	Year round	Re,C
534	RING DOVE *Streptopelia decaocto*	Trees & fences	Year round	Br,Re,C
535	RED TURTLE DOVE *S. tranquebarica*	Fence along W border	Sep-Jul ??	Re,O
537	SPOTTED DOVE *S. chinensis*	Trees along N border	Year round	Re,O

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
541	LITTLE BROWN DOVE *S. senegalensis*	Trees & fences	Year round	Br,Re,C
550	ROSERINGED PARAKEET *Psittacula krameri*	Trees & Mamool fort	Year round	Br,Re,C
558	BLOSSOMHEADED PARAKEET *P. cyanocephala*			R
571	PIED CRESTED CUCKOO *Clamator jacobinus*	Fence along W border	May, Jun, Aug, Nov	M,U
573	COMMON HAWK-CUCKOO *Cuculus varius*	PQ	Jan-Mar, May, Jul	U
590	KOEL *Eudynamys scolopacea*	Trees with dense foliage	Year round	Re,C
595	SMALL GREENBILLED MALKOHA *Rhopodytes viridirostris*	PQ	Feb, Mar, May	R
600	CROW-PHEASANT *Centropus sinensis*	Trees & gardens	Year round	Re,C
606	BARN OWL *Tyto alba*	Dead palm tree	Jul-Aug	R
608	GRASS OWL *T. capensis*			
651	SPOTTED OWLET *Athene brama*	Farm buildings & large trees	Year round	Re,O
664	SHORTEARED OWL *Asio flammeus*	RU & RM fields with grass	Feb'95	M,R
680	COMMON INDIAN NIGHTJAR *Caprimulgus asiaticus*			
703	HOUSE SWIFT *Apus affinis*		Mar, Jun-Sep	U
707	PALM SWIFT *Cypsiurus parvus*	Near palm trees	Nov-Jul	LM?,C
719	LESSER PIED KINGFISHER *Ceryle rudis*	CL, IL, RS	Resident	Re,C
723/724	COMMON BLUE KINGFISHER *Alcedo atthis*	IL, PM, RS	Nov-Mar, May, Jun	U
730	STORKBILLED KINGFISHER *Pelargopsis capensis*			
736/737	WHITEBREASTED KINGFISHER *Halcyon smyrnensis*	CL, IL, RS, PQ,Garden	Year round	Br,Re,C
748	BLUETAILED BEE-EATER *Merops philippinus*	IL, PM, RS	Oct-Mar	M,O

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
750	SMALL GREEN BEE-EATER *M. orientalis*	Fences, PL, trees	Year round	Re,C
755/756	INDIAN ROLLER *Coracias benghalensis*	Fences, PL, trees	Year round	Re,C
763/765	HOOPOE *Upupa epops*	Fallow fields & grasslands	Sep-May, Jul	Re,O
767	GREY HORNBILL *Tockus birostris*	Fruit-bearing trees	Jan-May, Oct, Nov	LM?,U
792	CRIMSONBREASTED BARBET *Megalaima haemacephala*	Tree tops, Swimming pool area	Jan-May, Sep, Oct, Dec	U
796	WRYNECK *Jynx torquilla*	IL bund	Mar'95	U
819	LESSER GOLDENBACK-ED WOODPECKER *Dinopium benghalense*			R
877	REDWINGED BUSHLARK *Mirafra erythroptera*			
878	ASHYCROWNED FINCH-LARK *Eremopterix grisea*	On ground in road	Jul-May ??	Re?,C
882	RUFOUSTAILED FINCH-LARK *Ammomanes phoenicurus*	On ground in road	Sep-Jun ??	Re?,C
886	SHORT-TOED LARK *Calandrella cinerea*			
899	CRESTED LARK *Galerida cristata*			
902	SKYES'S CRESTED LARK *G. deva*		Mar-Jun, Sep, Nov-Dec	U
907	SMALL INDIAN SKYLARK *Alauda gulgula*	'rarely positively identified	Mar	
910	COLLARED SAND MARTIN *Riparia riparia*			
912	PLAIN SAND MARTIN *R. paludicola*	IL	Mar '95	R
914	DUSKY CRAG MARTIN *Hirundo concolor*			R
916	COMMON SWALLOW *H. rustica*	PL & near water	Dec-May, Sep, Oct	LM?,O
921	WIRETAILED SWALLOW *H. smithii*	- do -	Aug, Oct-May	LM?,O
922	CLIFF SWALLOW *H. fluvicola*	PL	Jan, Mar-May, Oct, Dec	M?U
923	REDRUMPED SWALLOW *H. daurica*	PL & near water	Year round	Re,C

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
933	GREY SHRIKE *Lanius excubitor*	W border fence	Jun, Aug	R
940	BAYBACKED SHRIKE *L. vittatus*	Trees along W border	Mar, Oct	U
946	RUFOUSBACKED SHRIKE *L. schach erythronotus*	Trees & tall grass	Sep-May	M,O
947	GREYBACKED SHRIKE *L. s. caniceps*	- do -	Dec-Jan, Mar	U
949	BROWN SHRIKE *L. cristatus*	N & W borders	Sep-Apr	M,U
953/954	GOLDEN ORIOLE *Oriolus oriolus*	Gardens & PQ	Nov-Jun, Sep	O
958	BLACKHEADED ORIOLE *O. xanthornus*			
963	BLACK DRONGO *Dicrurus adsimilis*	PL, signs, trees	Year round	Br,Re,C
965	GREY DRONGO *D. leucocephalus*			
967	WHITEBELLIED DRONGO *D. caerulescens*			
982	ASHY SWALLOW-SHRIKE *Artamus fuscus*	PL	Jan, Mar-May	R
994	BRAHMINY MYNA *Sturnus pagodarum*	Fences, PL, trees	Feb-Apr	LM?,U
996	ROSY PASTOR *S. roseus*	BM 16 dump	Nov-Mar	M,U
1006	COMMON MYNA *Acridotheres tristis*	Grassland, gardens, trees	Year round	Br,Re,C
1032/1034	INDIAN TREE PIE *Dendrocitta vagabunda*	Trees, gardens, PQ	Year round	Re,O
1049	HOUSE CROW *Corvus splendens*	Fields, gardens, trees	Year round	Br,Re,C
1054	JUNGLE CROW *C. macrorhynchos*	Campus gardens	Oct-Dec, Mar-Jun, Aug	U
1070	COMMON WOOD SHRIKE *Tephrodornis pondicerianus*	PQ	Nov & Apr	U
1079	BLACKHEADED CUCKOO-SHRIKE *Coracina melanoptera*	IL back bund, PQ	Apr-Jun '91	R
1093	SMAL MINIVET *Pericrocotus cinnamomeus*	BR	Jul '95	R
1098	COMMON IORA *Aegithina tiphia*	Trees & gardens	Feb	R
1128	REDVENTED BULBUL *Pycnonotus cafer*	Trees & gardens	Year round	Br,Re,C
1138	WHITEBROWED	PQ	Feb-Mar '95	R

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
	BULBUL *P. luteolus*			
1231	YELLOW-EYED BABBLER *Chrysomma sinense*	Main drain exit point	Jul'95	R
1254	COMMON BABBLER *Turdoides caudatus*			
1258	LARGE GREY BABBLER *T. malcolmi*	PQ	Year round	Re,O
1262	JUNGLE BABBLER *T. striatus*		Jun	R
1267	WHITEHEADED BABBLER *T. affinis*	Swimming pool area, gardens	Feb-Dec ??	Re?,O
1411	REDBREASTED FLYCATCHER *Muscicapa parva*		Feb	R
1460/1461	PARADISE FLYCATCHER *Terpsiphone paradise*	PQ, RL banyan, gardens	Mar, Apr	LM?,R
1498	STREAKED FANTAIL WARBLER *Cisticola juncidis*	Grass near water	Feb, Apr-Jul, Nov-Dec	Br,U
1506	RUFOUSFRONTED PRINIA *Prinia buchanani*		Mar ??	R
1511	PLAIN PRINIA *P. subflava*		Mar, Nov	U
1515/1517	ASHY PRINIA *P. socialis*		Year round	Re,O
1521	JUNGLE PRINIA *P. sylvatica*		Sep	U
1535	TAILOR BIRD *Orthotomus sutorius*		Feb, May, Jun	R
1550	GREAT REED WARBLER *A. stentoreus*			R
1556	BLYTH'S REED WARBLER *A. dumetorum*			
1557	PADDYFIELD WARBLER *A. agricola*			
1562	BOOTED WARBLER *Hippolais caligata*		Nov	R
1567-1570	LESSER WHITETHROAT *Sylvia curruca*		Feb '95	R
1644	BLUETHROAT *Erithacus svecicus*	BM 16 Dump, RP	Oct-Mar	M,U
1661	MAGPIE-ROBIN *Copsychus saularis*	PQ	Mar, Apr, Nov	R
1672	BLACK REDSTART *Phoenicurus ochruros*	Campus gardens	Dec-Jan, Mar	M,R
1697	STONE CHAT	OF, signs, bushes	Oct-Apr	M,O

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
	Saxicola torquata			
1700/1701	PIED BUSHCHAT	- do -	Year round	Br,Re,C
	S. caprata			
1720	INDIAN ROBIN	- do -	Nov-Jul	Re?,O
	Saxicoloides fulicata			
1854/1855	TREE PIPIT			M,U
	Anthus trivialis			
1858?	PADDYFIELD PIPIT		Year round	Re,C
	A. novaeseelandiae rufulus			
1859?	RICHARD'S PIPIT		Mar	U
	A. n. richardi			
1861	TAWNY PIPIT		Dec '95	R
	A. campestris			
1875	GREYHEADED YELLOW WAGTAIL			M,U
	Motacilla flava thunbergi			
1876	BLUEHEADED YELLOW WAGTAIL *M. f. beema*	OF and near water	Nov-Apr	M,U
1878	TURKESTAN BLUE-HEADED YELLOW WAGTAIL			M,U
	M. f. melanogrisea			
1881/1882	YELLOWHEADED WAGTAIL *M. citreola*	- do -	Feb, Mar, Nov-Dec	M,U
1884	GREY WAGTAIL	- do -	Feb, Nov	M,U
	M. cinerea			
1885/1886	WHITE WAGTAIL	Fallow fields, lawns, near swimming pool	Oct-Mar	M,U
	M. alba			
1891	LARGE PIED WAGTAIL		Dec-Oct	Re,O
	M. maderaspatensis			
1899	TICKELL'S FLOWERPECKER			
	Dicaeum erythrorhynchos			
1907	PURPLERUMPED SUNBIRD	Flowering trees	Jan-Jun, Aug-Nov ??	Re?,O
	Nectarinia zeylonica			
1917	PURPLE SUNBIRD	- do -	Dec-Jun	LM?,O
	N. asiatica			
1933	WHITE-EYE			
	Zosterops palpebrosa			
1938	HOUSE SPARROW	Human dwellings	Mar-Jan	Re?,U
	Passer domesticus			
1957	BAYA	Nesting near open wells	Apr-Oct	Br,LM?,U
	Ploceus philippinus			
1961	BLACKBREASTED WEAVER *P. benghalensis*	Bulrushes	Jan-Oct	Br,LM?,U
1962	STREAKED WEAVER	Bulrushes	Feb-Jun, Dec	LM?,U
	P. manyar			

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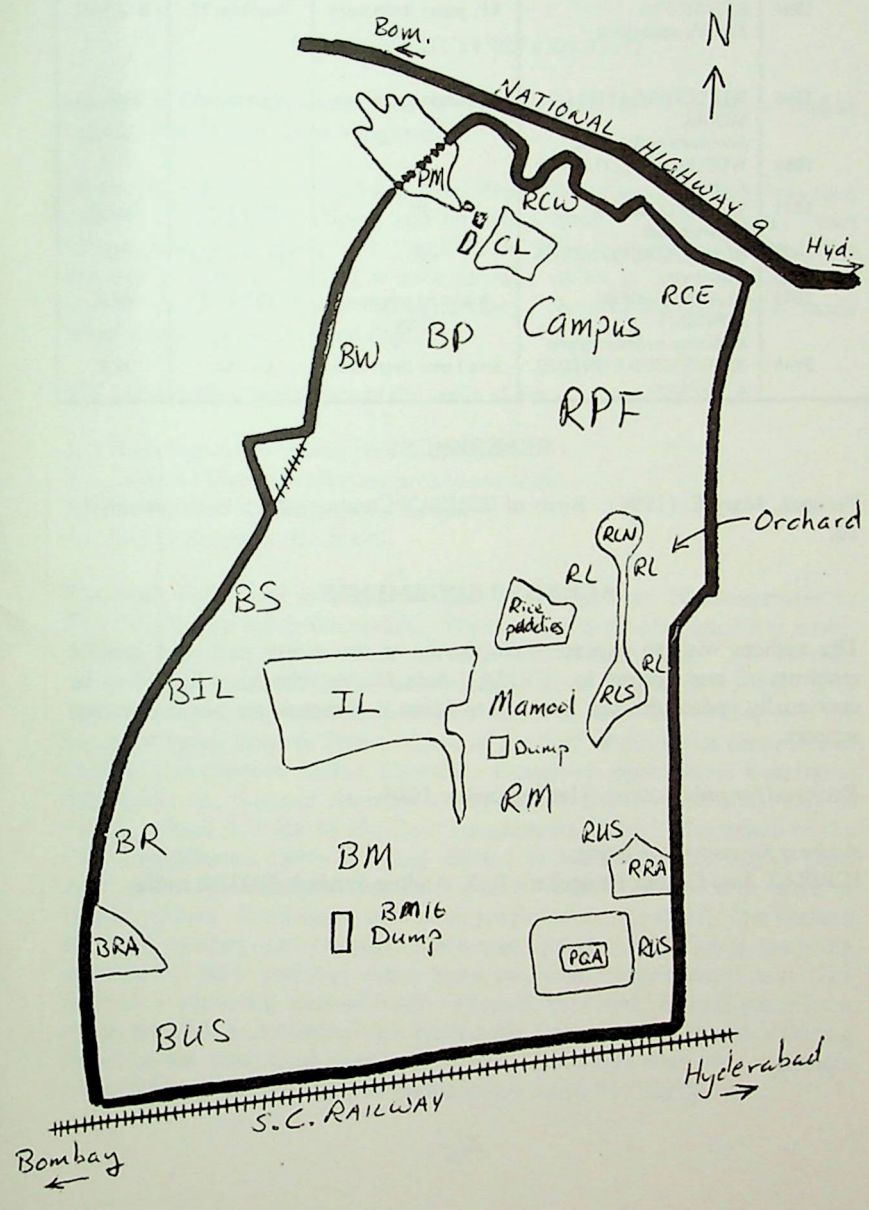

SYNOPSIS NO.	SPECIES	FREQUENT HABITATS	PERIOD OBSERVED	STATUS
1964	RED MUNIA *Estrilda amandava*	RP, grassy drain ways	Aug-Mar ??	Br,LM,U
1966	WHITETHROATED MUNIA *Lonchura malabarica*	Swimming pool area	Year round	Br,Re,C
1968	WHITEBACKED MUNIA *L. striata*			
1974	SPOTTED MUNIA *L. punctulata*	PL	May-Feb	Re?,O
1978	BLACKHEADED MUNIA *L. malacca*	- do -	May-Jul, Sep, Nov	U
2043	BLACKHEADED BUNTING *Emberiza melanocephala*	Maturing sorghum crops	Dec-Jan	M,R
2044	REDHEADED BUNTING *E. bruniceps*	Small trees near water	Dec-Jan	M,R

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Address for correspondence:
ICRISAT Asia Center, Patancheru P.O., Andhra Pradesh 502324, India.

A CASE FOR THE PROTECTION OF THE BAPATLA WETLANDS

KOKA MRUTYUMJAYA RAO

Bapatla in Guntur district of Andhra Pradesh, lies on the Vijayawada-Madras railway line, 80 km. from Vijayawada.

The shore and wetland is 9.5 km. from Bapatla town and forms a refuge for a number of species of resident and migratory birds. The Nallamada Drain (Nagaraju Kalava) along with Perali Drain flows through this wetland into the Bay of Bengal forming a wide estuary, which is a roosting place for several species of gulls and terns (Laridae). The area where the Nallamada empties into the sea is called Poguru.

The cartographic particulars of the wetland are

1. Nizamapatnam fishing port in the East.
2. Chirala (Vodarevu) fishing area in the West.
3. Karlapalem and Bapatla in the North.
4. Bay of Bengal in the South.

The total shore line is about 30 km. extending from Nizamapatnam to Chirala. Poguru lies in the middle. The area can be divided into three zones, A, B and C. B and C zones are important for bird life. The A zone commencing from Nizamapatnam extends for a length of 15 km. upto Poguru, with an approximate width of 1 km. The West side of zone A is the border of Perali Reserve Forest. Some of the flora of this forest comprises of Cashew Nut *Catechu indica*, Casuarina *Casuarina equisetifolia* Eucalyptus *Eucalyptus* sp., Soapnut *Sapindus emarginatus*. On the East is the Bay of Bengal. Zone A is cut by the East Tungabhadra Drain. The mouth of the East Tungabhadra Drain is being utilised as Nizamapatnam fishing port. Zone A consists mainly of mangrove forest. A little wetland area exists at Nizamapatnam. Sand dunes with scrub jungle lies on the shore. The wetland is getting reduced due to human interference. Residential buildings are being constructed. Some parts are slowly being converted to agricultural land. The wetland is attracting wetland birds. Through this zone, a creek starts from Nizamapatnam and merges with Nallamada Drain near its mouth. During high tide the water level rises in the creek. Fishermen from Nizamapatnam come to Poguru on the creek, in their country boats, for fishing.

The B Zone mainly consists of the mouth of the Nallamada and Perali Drains, and the East and West banks of the drain, which are inundated during high tide. The mouth is a roosting place for hundreds of gulls and terns (Laridae). These birds, in all probability, feed around Nizamapatnam fishing port and the Vodarevu area. On 2-11-1988 approximately 2,000 birds were counted roosting here. Mud skippers (*Periopthalmus*) are found in good numbers on the North bank area.

The C Zone can be divided into two parts.

1. Extending from West bank of Nallamada Drain upto Bapatla-Suryalanka road, for approximately 3 km. with a width of 1.5 km. Having Muthaipalem Reserve Forest as a border on its North. The soil of this wetland is sandy loam sand dunes and on shoreline this is divided by strips of grassland and scrub jungle. The sand dunes also covered with scrub.
2. Extending from Bapatla-Suryalanka to Pandurangapuram road for c. 2.5 km. and width ranging between 0.5 km. to 0.75 km. On the North is the border of Muthaipalem Reserve Forest and on the South, the air force base. The soil is shallow sandy grassland with scrub jungle.

The C Zone gets inundated during the rainy season nd due to high tides and serves as feeding source for wetland birds other shore birds. During rainy season water flows from Pandurangapuram area through C Zone and falls into Nallamada Drain. During heavy rains and cyclone periods the depth of water reaches 3-4 feet and the entire water flows into Nallamada Drain.

The C Zone covers approximately 800 acres of wetland and 800 acres of grassland with scrub jungle. This 800 acres of wetland serves as feeding area to birds. As Nallamada drain draws water from wetland and 2nd part retains water for a long period and some times upto February ending. Even though the Drain draws water in first part of C Zone, water remains in shallow areas and pools. But it is inundated with high tides and moisture prevails throughout the year.

During recent years the interference of human population is more. Almost the scrub jungle vanished. It became thin due to cutting of the jungle for fire-wood and fodder. Number of village women are carrying fire wood in huge number by cutting the scrub jungle for self and commercial purpose. Two years ago 60 Ha. of scrub jungle cleared and utilised for Eucalyptus

plantation. three months back large area of scrub jungle was cleared by the side of the air force station probably for social forestry. The air force base is in scrub jungle area where there is no destruction of scrub jungle for fire wood. In air force station jungle grows well and attracting good number of avian population an species such as Rosy Pastors, Brahminy, Common and Pied Myna, Redvented and Redwhiskered Bulbul, Spotted Dove, Common Woodshrike, Blue Jay, Little Green Bee-eater, Pied Crested Cuckoo, Koel, Roseringed Parakeet, Grey Partridge, Sunbirds (Nectarinidae), Rufousbacked Shrike, etc. This year I found hundreds of Rosy Pastors inside the air force base. during 5 years this is the first time to see them in large numbers. The air force station does not have a air strip, for which hundreds of acres of land are being acquired.

Besides cutting firewood, the area is being disturbed by fishermen and cattle. At the shoreline, human activity is increasing. Thus the area is fast losing its wetland and scrub jungle habitat. The wetland is approximately 30 sq. km. in area and is covered by mangrove, grass and scrub jungle, requires immediate protection and improvement as the situation is alarming.

On an enquiry it is learnt that turtles are laying eggs on the shore of A Zone and fishermen collecting them !

Besides the above, Openbilled Storks *Anastomus oscitans* are observed throughout the year at Chundur, 30 km. from Bapatla. In August and September they are seen in good numbers. Previously they used to breed at Chundur. Due to cutting of roosting trees and the disturbance caused by villagers the number is reduced. Since two years Openbilled Storks are trying to breed. Before last year, mating, carrying twigs for nesting were seen but I did not find any nest built by them. Last year six pairs built nests and laid eggs, but they were being disturbed constantly. They are feeding in fields in flocks, each flock consists of about 20 to 30 birds. Once I observed a big flock of about 150 birds. These Openbilled Storks require protection. If protection is provided there will be a very good congregation of birds and good nesting colony also.

The following is a list of birds (not complete) observed in the wetlands and along the shoreline of Bapatla.

LITTLE CORMORANT
Phalacrocorax niger
Occasional.

PURPLE HERON *Ardea purpurea*
LARGE EGRET *Ardea alba*
MEDIAN EGRET *Egretta intermedia*

LITTLE EGRET *E. garzetta*
INDIAN REEF HERON *E. gularis*
PAINTED STORK *Mycteria leucocephala*
Seen in October - Passage Migrant ?
WHITENECKED STORK
Ciconia episcopus
Scarce. Once seen 12 birds.
WHITE IBIS *Threskiornis aethiopica*
GLOSSY IBIS *Plegadis falcinellus*
Occasional.
BRAHMINY DUCK *Tadorna ferruginea*
Very few sightings.
SHOVELLER *Anas clypeata*
Occasional.
GREY PARTRIDGE
Francolinus pondicerianus
REDWATTLED LAPWING
Vanellus indicus
GREY PLOVER *Pluvialis squatarola*
LITTLE RINGED PLOVER
Charadrius dubius
KENTISH PLOVER *C. alexandrinus*
CURLEW *Numenius arquata*
BLACKTAILED GODWIT *Limosa limosa*
GREENSHANK *Tringa nebularia*
SPOTTED SANDPIPER *T. glareola*
COMMON SANDPIPER *T. hypoleucos*
FANTAIL SNIPE *Gallinago gallinago*
BLACKWINGED STILT
Himantopus himantopus
AVOCET *Recurvirostra avosetta*
STONE CURLEW *Burhinus oedicnemus*
SMALL INDIAN PRATINCOLE
Glareola lactea
GREAT BLACKHEADED GULL
Larus ichthyaetus
BROWNHEADED GULL
L. brunnicephalus
BLACKHEADED GULL *L. ridibundus*
CASPIAN TERN *Hydroprogne caspia*
RIVER TERN *Sterna aurantia*
LITTLE TERN *S. albifrons*
PIED CRESTED CUCKOO
Clamator jacobinus
WHITE COLLARED KINGFISHER
Halcyon chlrois
SMALL GREEN BEE-EATER
Merops orientalis
BLACK DRONGO *Dicrurus adsimilis*
REDVENTED BULBUL *Pycnonotus cafer*
YELLOW WAGTAIL *Motacilla flava*
WHITE WAGTAIL *M. alba*
LARGE PIED WAGTAIL
M. maderaspatensis

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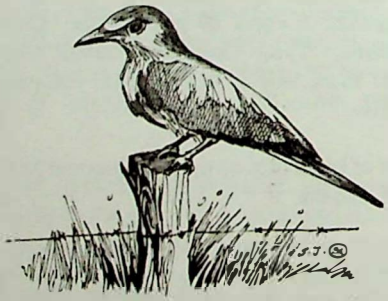
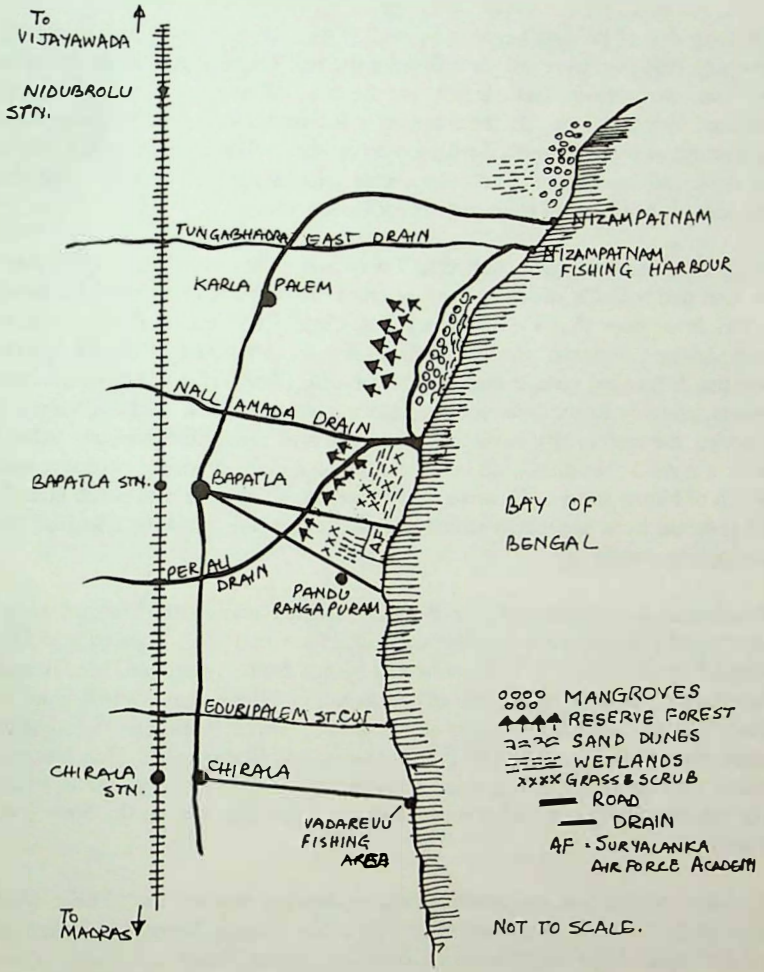
Address for correspondence:
Junior Engineer, Telecom Office, Kuchipudi, Krishna district 521136, Andhra Pradesh.

NOTE: Please turn over for map of Bapatla area.



ROLLER *Coracias benghalensis*

MAP OF BAPATLA SHORE AND OTHER WETLANDS



BIRDING AT NIZAMSAGAR, NIZAMABAD DISTRICT, ANDHRA PRADESH

T. GANESH & P. KANNIAH

Our long day of birding began very well. As soon as dawn broke on 25th February 1990, we were on our way from the rest house at Achampet towards the dam; we were in fact already on the trail of a cat which had simply vanished in front of us. By the time we rediscovered it, it was 50 yards from us, trotting over a hill covered with loose boulders and scrub. In a short while the agile looking Jungle Cat *Felis chaus* once again disappeared over the shoulder of the hill, and we could not locate it again.

Following the cat we had reached half way to the dam, now walking through the lush paddy fields which occupy much of the down stream from the bund. It was from here that we saw flocks of Little Cormorants *Phalacrocorax niger*, Large Cormorant *P. carbo* and Glossy Ibis *Plegadis falcinellus* flying over the Achampet village from the Sagar side. Following these were some waders, possibly Ruffs *Philomachus pugnax*. We could not hold the suspense of seeing the waters any more and so a dash was made to the bund. Alas ! What a sight ! No ducks, no cormorants, no ibises. Nothing except a vast stretch of bluish waters. However in the waters, a few rock and scrub islands did prop up here and there which probably were the roosting sites for the cormorants and ibises.

Nizamsagar is formed due to a dam constructed across the Manjira river. After eight years of work the dam was completed in 1931. Located 160 km. north of Hyderabad, it is well connected by bus from Hyderabad, Medak and Nizamabad. A striking feature of the *sagar* is a long bund which runs to about 5.2 km. with three major sluice gates. There is another small dam meant for power generation to the south-east of Nizamsagar. This place is locally referred as Head Sluice and one can walk along the shoreline to reach it or cut through the degraded forest and reach the dam site on the other side of the hill.

The Head Sluice was the most rewarding birding site for us. There were some large *Ficus* sp. trees here and also a few Mango *Mangifera indica* in flower. Apart from these, Indian Laburnum *Cassia fistula* and Flame of the Forest *Butea frondosa* were fairly common. The almost abandoned guest house at this place was the most interesting birding corner. Here we saw the

Scarlet Minivet *Pericrocotus flammeus*, Blacknaped Oriole *Oriolus chinensis*, Whitebrowed Fantail Flycatcher *Rhipidura aureola*, Redbreasted Flycatcher *Muscicapa parva*, Black Redstart *Phoenicurus ochruros*, Grey Tit *Parus major*, Blackbacked Woodpecker *Chrysocolaptes festivus* and Jerdon's Chloropsis *Chloropsis cochinchinensis*. All these in the compound of the guest house ! After walking half of the day in the hot sun without seeing anything interesting and then finding everything in one place, was very exhilarating and satisfying.

The forest which is left in this area, and which we walked through, from Nizamsagar to the Head Sluice, was heavily cut by the local villagers. There were a few large trees still standing which gave an appearance of a forested area from a distance. Much of the shoreline is covered by scrub and light forest but that is only an illusion. A little interior, cultivation was in full swing.

In all, we walked 15 km., mostly parallel to the shoreline of the *sagar* to reach Yellareddi from Achampet. Nowhere did we see any waterfowl, but the local people informed us about better duck like on the western shoreline. We however could not make it there but hope to go back some day and cover that area also.

NOTES ON BIRDLIFE AROUND NIZAMSAGAR (ACHAMPET), NIZAMABAD DISTRICT, VISITED ON 24 - 25 FEBRUARY 1990.

LARGE CORMORANT *Phalacrocorax carbo*	A few seen flying with flocks of Little Cormorants, Nizamsagar. Possibly roosts on the islands at the *sagar*.
LITTLE CORMORANT *P. niger*	Large flocks, 300 + seen flying, Nizamsagar. Possibly roosts on islands.
GREY HERON *Ardea cinerea*	Three birds seen down stream, Nizamsagar.
PURPLE HERON *A. purpurea*	Solitary bird flying over paddy fields, Nizamsagar.
POND HERON *Ardeola grayii*	Single bird at Achampet village.
CATTLE EGRET *Bubulcus ibis*	Seen in paddy fields near Nizamsagar.
MEDIAN EGRET *Egretta intermedia*	Solitary bird seen over the bund, Nizamsagar.
LITTLE EGRET *E. garzetta*	A few seen on paddy fields. Nizamsagar.
WHITENECKED STORK *Ciconia episcopus*	Solitary bird seen over the bund, Nizamsagar.
GLOSSY IBIS *Plegadis falcinellus*	Some 100 + birds seen flying in the morning, Nizamsagar. Possibly roost on the islands.
SPOTBILL *Anas poecilorhyncha*	A pair seen flying about. Nizamsagar. (No other ducks / teals seen).
PARIAH KITE *Milvus migrans*	Common. Seen all through the trip.
BRAHMINY KITE *Haliastur indus*	Single adult at Nizamsagar.

SHIKRA *Accipiter badius*	Noticed at Nizamsagar.
BONELLI'S EAGLE *Hieraaetus fasciatus*	Single adult flying above power house, Head Sluice.
LONGBILLED/GRIFFON VULTURE *Gyps* sp?	Solitary bird. Nizamsagar. Unidentified.
WHITEBACKED VULTURE *G. bengalensis*	Flocks of 5 to 6, Nizamsagar.
SCAVENGER VULTURE *Neophron percnopterus*	Commonly seen at all places.
MONTAGU'S HARRIER *Circus pygargus*	Solitary male over paddy fields on at Nizamsagar.
MARSH HARRIER *C. aeruginosus*	Pair seen over fields, Nizamsagar.
KESTREL *Falco tinnunculus*	Single bird seen at Nizamsagar.
PEAFOWL *Pavo cristatus*	Three males seen in the forest. Nizamsagar.
WHITEBREASTED WATERHEN *Amaurornis phoenicurus*	Solitary bird in reed beds near sluice gate. Nizamsagar.
REDWATTLED LAPWING *Vanellus indicus*	Seen down stream. Nizamsagar. Also seen along the shore.
LITTLE RINGED PLOVER *Charadrius dubius*	Solitary bird among pebbles. Head sluice (Power house).
GREEN SANDPIPER *Tringa ochropus*	A pair seen in the tank near Head Sluice.
SPOTTED SANDPIPER *T. glareola*	Four birds along with Green Sandpiper.
COMMON SANDPIPER *T. hypoleucos*	Commonly seen near the sluice gates. Nizamsagar.
STONE CURLEW *Burhinus oedicnemus*	Heard near rocks, down stream. Nizamsagar. Possibly nesting here (?).
GULBILLED TERN *Gelochelidon nilotica* ??	Lone bird, flying over water. Nizamsagar.
BLUE ROCK PIGEON *Columba livia*	Commonly seen. Nizamsagar.
RING DOVE *Streptopelia decaocto*	Solitary bird, down stream. Nizamsagar.
SPOTTED DOVE *S. chinensis*	A pair at Head Sluice.
LITTLE BROWN DOVE *S. senegalensis*	Common. Seen everywhere. The most common dove.
ROSERINGED PARAKEET *Psittacula krameri*	Common everywhere. Possibly nesting at Head Sluice.
BLOSSOMHEADED PARAKEET *P. cyanocephala*	Pair seen feeding on 'Mohwa' *Madhuca indica* flowers. Somaripet. Much less common than *P. krameri*..
CROW-PHEASANT *Centropus sinensis*	Seen at all places. Habitat ranging from dry forest to wet paddy fields.
SPOTTED OWLET *Athene brama*	Single bird seen near Achampet village.
NIGHTJAR *Caprimulgus* sp ?	Seen flying over road at Yellareddi.
HOUSE SWIFT *Apus affinis*	Common at Nizamsagar bund.
LESSER PIED KINGFISHER *Ceryle rudis*	Common along the waters' edge.
SMALL BLUE KINGFISHER *Alcedo atthis*	Solitary bird down stream. Nizamsagar.
WHITEBREASTED KINGFISHER *Halcyon smyrnensis*	Common. Seen everywhere.
SMALL GREEN BEE-EATER	Possibly nesting on bunds along dry fields near Somaripet.

Merops orientalis INDIAN ROLLER	A pair seen near Head Sluice.
Coracias benghalensis GREY HORNBILL	A pair near Head Sluice.
Tockus birostris COPPERSMITH	Common around habitations at Achampet and power house.
Megalaima haemacephala BLACKBACKED WOODPECKER	Nesting. Male seen probing a dead trunk. Head Sluice. Guest House.
Chrysocolaptes festivus REDWINGED BUSHLARK	Few birds encountered at Nizamsagar.
Mirafra erythroptera ASHYCROWNED FINCH-LARK	Not very abundant anywhere. Seen at all places.
Eremopterix grisea RUFOUSTAILED FINCH LARK	Commonly seen all through. Possibly breeding.
Ammomanes phoenicurus DUSKY CRAG MARTIN	A few seen along Nizamsagar bund.
Hirundo concolor COMMON SWALLOW *H. rustica*	Common everywhere.
WIRETAILED SWALLOW *H. smithii*	A few seen at Nizamsagar and near Head Sluice along with *H. rustica*.
REDRUMPED SWALLOW *H. daurica*	Commonly seen at Nizamsagar and also at Head Sluice.
GREY SHRIKE *Lanius excubitor*	Only a lone bird between Head Sluice and Somaripet.
BAYBACKED SHRIKE *L. vittatus*	Seen on the fringe on scrub forest.
RUFOUSBACKED SHRIKE *L. schach*	Encountered near fields and scrub forest.
GOLDEN ORIOLE *Oriolus oriolus*	Seen at Head Sluice check post and in flight at Nizamsagar.
BLACKNAPED ORIOLE *O. chinensis*	Solitary male seen near guest house, Head Sluice.
BLACK DRONGO *Dicrurus adsimilis*	Often seen in open areas.
BRAHMINY MYNA *Sturnus pagodarum*	Common. Seen at Nizamsagar, Head Sluice and Somaripet.
ROSY PASTOR *S. roseus*	Flocks of 30 seen at Nizamsagar. Noticed on *Butea* sp. and also seen heading towards Yellareddi in large flocks of 50.
COMMON MYNA *Acridotheres tristis*	Common. Seen almost at all places. Also seen in the forest.
HOUSE CROW *Corvus splendens*	Common everywhere.
LARGE CUCKOO-SHRIKE *Coracina novaehollandiae*	Seen feeding on *Ficus religiosa* figs at Head Sluice.
BLACKHEADED CUCKOO-SHRIKE *C. melanoptera*	Seen at Head Sluice and Nizamsagar.
SCARLET MINIVET *Pericrocotus flammeus*	One female at guest house Head Sluice. Seen alongwith flycatchers in mango grove. Not encountered elsewhere.
SMALL MINIVET *P. cinnamomeus*	A pair near power house, Head Sluice on *Butea* sp. flowers.
COMMON IORA *Aegithina tiphia*	At Head Sluice only.
JERDON'S CHLOROPSIS *Chloropsis cochinchinensis*	More than 2 birds seen feeding on *Ficus* sp. figs at Head Sluice. They were there for more than 2 hours
REDVENTED BULBUL *Pycnonotus cafer*	Common everywhere including the forests.
RUFOUSBELLIED BABBLER	Flocks noticed at garden, Nizamsagar. Not encountered

Dumetia hyperythra	elsewhere.
YELLOWEYED BABBLER	Paddy fields and scrub, Nizamsagar.
Chrysomma sinense	
JUNGLE BABBLER	A flock of 5-6 between Head Sluice and Somaripet.
Turdoides striatus	
BROWN FLYCATCHER	Heard and seen at Nizamsagar and between Head Sluice and
Muscicapa latirostris	Somaripet. Widely distributed.
REDBREASTED FLYCATCHER	Only at guest house, Head Sluice. Seen in association with
M. parva	other flycatchers.
TICKELL'S BLUE FLYCATCHER	Seen along with *M. parva*. Noted chasing it from its
M. tickelliae	territory.
WHITEBROWED FANTAIL	Only near guest house, Head Sluice. Heard calling in mango
FLYCATCHER *Rhipidura aureola*	topes.
PARADISE FLYCATCHER	Only near guest house, Head Sluice. Only female seen.
Terpsiphone paradisi	
RUFOUSFRONTED PRINIA	Single bird on Nizamsagar bund. Front was very
Prinia buchanani	conspicuous. Foraging on grassy slopes.
PLAIN PRINIA *P. subflava*	Seen once in the forest near power house.
ASHY PRINIA *Prinia socialis*	Common along bund.
JUNGLE PRINIA *P. sylvatica* ?	Seen once in the forest near power house.
TAILOR BIRD	Common around bund and buildings. Did not encounter in
Orthotomus sutorius	hilly and rocky areas.
BLYTH'S REED WARBLER	Heard and seen near guest house, Head Sluice.
Acrocephalus dumetorum	
Hippolais sp. ?	Seen at all places.
GREENISH LEAF WARBLER	Seen near guest house, Head Sluice.
Phylloscopus trochiloides	
MAGPIE-ROBIN	Encountered at Nizamsagar, head Sluice and also in scrub
Copsychus saularis	forest.
BLACK REDSTART	Seen everywhere. The adult male more common than
Phoenicurus ochruros	female.
PIED BUSHCHAT	Common along bund, Nizamsagar. Elsewhere noted at Head
Saxicola caprata	Sluice check post.
INDIAN ROBIN	Very common at Nizamsagar. Birds in courtship display.
Saxiculoides fulicata	Also noted at other places.
BLUE ROCK THRUSH	A pair along Nizamsagar bund. Not seen elsewhere.
Monticola solitarius	
GREY TIT *Parus major*	A pair seen on Mango topes near guest house, Head Sluice.
PADDYFIELD PIPIT	Seen on open ground around dam and near Somaripet.
Anthus novaeseelandiae	
GREY WAGTAIL	Seen at sluice gates, Nizamsagar. Also at Head Sluice.
Motacilla cinerea	
LARGE PIED WAGTAIL	Common at Nizamsagar bund. Possibly breeding near sluice
M. maderaspatensis	gates.
PURPLERUMPED SUNBIRD	Common. Seen probing *Butea* sp. flowers *Ipomea* sp.
Nectarinia zeylonica	flowers.
PURPLE SUNBIRD *N. asiatica*	More common than former.
HOUSE SPARROW	Common around habitations.
Passer domesticus	
YELLOWTHROATED SPARROW	Seen in the forest in flocks and also near Somaripet.
P. xanthocollis	
BAYA *Ploceus philippinus*	Number of nests seen. Bird sighted near paddy fields,

	Nizamsagar.
WHITETHROATED MUNIA *Lonchura malabarica*	Seen at Nizamsagar and Head Sluice check post.

Address for communication:
T. Ganesh, S-1 Uma Apartments, Ram Nagar Colony, Alwal, Secunderabad 500010.
P. Kanniah, 128 Balaji Colony, Kakaguda, Secunderabad 500015.

GREY SHRIKE *Lanius excubitor*

GREY PELICAN *PELECANUS PHILIPPENSIS* - OVER VIEW OF AN ENDANGERED BIRD

S. RIYAZUDDIN

A bird whose elegance was once spread all over south Asia is the Spotbilled *Pelecanus philippensis* or Grey Pelican. This bird was first recorded in India over a century ago (Blyth 1844, quoted by Lamba, 1963) occurring in watered tracts throughout the country. In 1877, Oates found millions (!) of pelicans on the bank of Sittang river in Myanmar (erstwhile Burma). Sri Lanka, Malaysia, Vietnam and India were the other countries where pelicans could be seen in such large numbers. Now all these birds have almost disappeared from these countries, except in parts of south India and Sri Lanka where reasonably good numbers of pelicans still survive. The species has almost vanished or is extremely rare in its eastern ranges in Myanmar, Thailand, Malaysia and Vietnam. The only known breeding population in these parts consists of ten birds in Sumatra. Between 1959-61 the species was reportedly common in the Great Lake area of Kampuchea, but there has been no information from this region for the last 3 decades. In Sri Lanka, most of the pelicans counted during the Asian Waterfowl Census were from the southern (Bundala-Tissa-Maharama) area. The number of breeding pairs are a few hundreds there. In 1988 the Grey Pelican became a candidate for the IUCN Red Data list of threatened birds.

In March of 1890, Howard Campbell had camped in a valley to the extreme east of Cuddapah District (then in Madras Presidency). Here he found a large number of pelicans breeding in the company of Painted Storks *Mycteria leucocephala*. Hundreds of nests were seen on Neem *Azadirachta indica* and Tamarind *Tamarindus indicus* trees in the village of Buchupalle. The parents of both species kept coming and going, bringing with them fine trailings of water weeds from a tank about 2 miles away. Recently I have tried to locate this village, Buchupalle, but neither does the district list of villages have any village by this name, nor do the local people know of any such village. Some *shikaris* (hunters) have directed me to a *ghat* section on the Nandalur-Tangatur road and also there are old reports of the breeding of pelicans in this region and also the presence of a large tank nearby. In July I visited this area which is about 45 kms. south-east of Cuddapah town. In the ghat section, there is a village named Rasupalle, where there are Neem and Tamarind trees. About 150 nests, of the Little Egret *Egretta garzetta* could be seen on these trees. Some had chicks in them. On enquiry, none in this village

remembers of the breeding of pelicans here but they reported that about 10 years ago these birds could be seen flying across the village and going to Pennar river to feed. No birds have been seen since then. There was information that in a village called Labaku about 10 km. from Rasupalle, pelicans have been reported to be nesting. When I visited the place the villagers showed me the Tamarind, Neem and Banyan *Ficus bengalensis* trees on which they said the pelicans come to nest. They have seen fallen chicks and eggs lying on the ground and also identified the birds correctly from the pictures of Grey and White *Pelecanus onocrotalus* Pelicans, which I showed them. A tank, about 2 km. from the village seemed to be the main feeding area for the pelicans during their nesting period as it was full after the rains. I did not visit this place this year again, as Cuddapah did not get enough rain during the season and most of the tanks are dry. During my visit to Labaku, I have seen Cattle Egret *Bubulcus ibis* and Pond Herons *Ardeola grayii* nesting in this area on Tamarind trees. In 1991, there was a report from Nandalur of a Grey Pelican found stuck in the slushy reeds. The villager who saw this bird, took it to the Collector who rewarded him for it. Several villagers reported having seen the bird. There are similar reports of nesting of the Grey Pelicans from Reddipalle on Cuddapah-Budvel road. Aitanna (the village trapper who found the Jerdon's Courser *Cursorius bitorquatus*) has regularly seen 3 pairs of pelicans nesting on a Banyan tree. Unfortunately, that tree has now been cut down. In Cuddapah, the Telugu name for the pelican is "Kankane".

C. Ramakrishna, (*Mayura*, 1990) reports of 4 pelicans on 2 nests on a Neem tree in Vedurupattu village, Nellore district. This place is adjacent to the Kalingi river about 40 km. south of Gudur and for many years has been a nesting place for Painted Storks. The Grey Pelicans that breed at Nelapattu (Nellore district) arrive there around November and stay on till March. The main feeding area for these birds seems to e the Pulicat Lagoon and Sanctuary, which is about 15 km. south-east of here. There is a small fresh water tank at the bird sanctuary where the pelicans nest on Barringtonia *Barringtonia racemosa* trees spread all over the lake. There are hides provided for watching these birds and accommodation is available only at Sullurupet, about 15 km. south.

There are several hundreds of other waterbirds like Cormorants (Phalacrocoracidae), Shags *Phalacrocorax fuscicollis*, Egrets (Ardeidae), Openbill Storks *Anastomus oscitans*, Grey Herons *Ardea cinerea*, Ibises

(Threskiornithidae) and Pond Herons nesting on the trees at Nelapattu Bird Sanctuary. Even the villagers offer full protection to these birds.
Neelakantan (1949) had discovered perhaps the largest pelicanry in India near the village of Aredu in West Godavari district. he had counted more than 800 adults and 1200 chicks of the Grey Pelican in March 1949. Lamba studied the same site and species about the same time in 1956-57 and in the process found some more pelicanries close by and called them "Kolleru Pelicanries". Guttikar (1979) had seen hundreds of pelicans nesting on Palmyra Palms *Borassus flabellifer* and Gee (1960) had counted 3000 birds in an area of about 2 sq. miles. When Guttikar again visited Kolleru between December 1974 and February 1975, he did not see a single pelican. They probably disappeared owing to changes in the eco-system brought about by human interference. The Palmyra trees on which the big birds nested were cut down and replaced by Coconut Palms *Cocos nucifera* and the use of pesticides seemed very widespread. Another important factor seemed to be shortage of food. While on one side fish breeding and catching and even fish farming had become very organised due to the presence of the Kolleru Lake Fisheries Co-op. Society, on the other side the birds were being denied their main source of food. A 1972 survey shows export of nearly 20,000 tonnes of fish annually to Calcutta alone. Gee had counted 1500 nests or nearly 3000 adult birds. At an average of 2 kg. of fish per bird per day (Ali & Ripley, 1968) for a period of 5 months (150 days) works out to a staggering 9 lakh kilograms of fish ! Still the fishermen of Kolleru never regarded the pelican as a serious pest and the farmers also recognised the importance of the pelicans' droppings as a natural fertiliser. The only large lake which could provide such huge quantities of fish was the nearby Kolleru Lake. This waterbody has a maximum flooding area of 90,000 Ha. at 3+ m. which falls to 13,000 Ha at 1+ m. Nestled between the deltas of Krishna and Godavari rivers this region is greatly influenced by Monsoon run-off. Since the surrounding areas are agricultural land the most serious threat to the lake is the usurpation of large tracts in and around the lake for agricultural expansion. Nearly 3400 Ha. have been drained and encroached upon in recent years for farmlands and fish ponds. This encroachment has led to rapid increase in the flow of industrial and agricultural effluents into the lake. Fortunately Kolleru has been chosen as one of the 16 wetland sites for conservation by the National Wetlands Management Committee.

Though this is an important wetland for fishery, poor management has led to depleted catches from nearly 7,000 tonnes in 1974 to less than 3,000 tonnes in 1985. More than 63 species of fishes have been recorded from this lake.

In 1960 the largest breeding colony of Grey Pelicans was found here with at least 1500 nests. By 1968 these had come down to 400 pairs of birds (200 nests) and by 1974 the whole population had disappeared. One major reason was probably the large amounts of pesticides and industrial effluents that had entered the lake from surrounding lands.

Between 1940 and 1980, Grey Pelicans were recorded from the following places:

1. Kaziranga Wildlife Sanctuary, Assam.
2. Sajnakhal, Sunderbans, West Bengal.
3. Kolamuru and neighbouring villages, West Godavari district, Andhra Pradesh.
4. Nelapattu Bird Sanctuary, Nellore district, Andhra Pradesh.
5. Bellur and Bennali village, Mandya district, Karnataka.
6. Kanjiramkulam village, Ramnad district, Tamil Nadu.
7. Kundakulam village, Tirunelveli district, Tamil Nadu.

Occasionally birds have been seen at Vedanthangal Bird Sanctuary, Chengalpettu district, Tamil Nadu and Moondraidapu village (not far from Kundakulam village) in Tamil Nadu.

Of all these places Kolamuru (W. Godavari district) in Andhra Pradesh, where Gee had counted nearly 1500 nests in 1960 was the most important breeding centre. M. Krishnan, the well known naturalist-photographer was the last to see and count about 400 pairs nesting (in Jan. 1968) at Kolamuru.

By 1974, not a single nest or bird could be seen (Guttikar, 1974). Though the Grey Pelican can still be seen on the eastern coast at Point Calimere (Tamil Nadu) and Pulicat Lagoon (Andhra Pradesh) in small areas and numbers, the villagers around Kolleru had lost this magnificent bird. Neginhal (1976) found a pelicanry at Bellur and Bennali in Mandya district of Karnataka. A fragmented population of birds that deserted Kolleru may have joined up here. Reportedly, pelicans have been breeding here on palm trees surrounding the village. The water source is some distance away. From 185 nests in 1979 the nests have declined to 60 in 1991 mainly because of the cutting down of the palm trees. At Kokre Bellur, the birds have shown a slight increase in numbers from 128 in 1991 to 143 in 1992. The Asian Waterfowl Census (AWC) figures for Karnataka state has shown an

encouraging uptrend for the past six years - 1987 - 1; 1987 - 27; 1989 - 150; 1990 - 2; 1991 - 141; 1992 - 255.

In India, the stronghold of this pelican seems to be Assam. About 2,236 birds were counted during the 1990 AWC. Some of the more important areas for pelican breeding and observations in the state are Koladur and Agoretoli Range in Kaziranga National Park, Orang Sanctuary at Velajar, Pabitora Sanctuary at Tupling, and around Sibsagar wetlands. At one place, 12 nests were observed in a single *Bombacilla* sp. tree. A very large colony of 1500 birds was counted by E. Ali at Debeswari Tapu (river island) in Brahmaputra river. These birds were also seen at Minimukh at Kaziranga but these have now shifted to Koladur owing to heavy tourist pressure and disturbance. Many of the nests in Kaziranga and Orang and Pabitora are in *Ficus* and *simul* trees.

Andhra Pradesh has got the second largest population of Grey Pelicans in India (about 550 birds). The present world population is estimated at 6,000 birds with 3,000 from India and 3,000 from Sri Lanka. A very small number for such a large bird.

The huge pelicanry at Shwe-gyen on Sittang river in Myanmar once had millions of pelicans which have all disappeared now (Gee, 1963). Developmental activities industrialisation, pisciculture, increase in human population, spread of towns and cities and agricultural development and use of pesticides etc., has all but wiped out the pelicans of the world. Just like International Wetland Research Bureau (IWRB) has taken steps to protect the Whitewinged Wood Duck *Cairina scutulata* and the Bombay Natural History Society has taken up the cause of the hornbill, some organisations should come forward to protect the pelican. If this is not done, then we will lose this useful and rare bird for ever. And that will be a shame.

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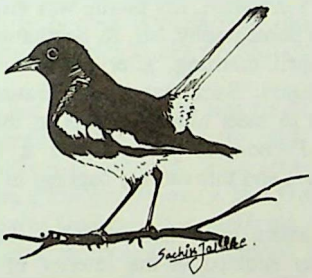
Address for correspondence:
15/296 Bandla mitta Street, Cuddapah 516 001 (Andhra Pradesh).



MAGPIE-ROBIN *Copsychus saularis*

A WEEK IN SRIHARIKOTA WITH THE BNHS BIRD RINGING TEAM

HUMAYUN TAHER

The Bombay Natural History Society (BNHS) have started a permanent ringing station on Sriharikota Island in Nellore District of Andhra Pradesh. In February 1990 they were operating in Pulicat Lagoon, ringing migrant waterfowl under the guidance of Mr. S. Balachandran, a senior scientist of the BNHS. After February the station shifted to Tirumala hills in Tirupati (Chittoor District, A.P.) for a few weeks and then returned to Sriharikota. In April 1990, I went to Sriharikota to participate in the ringing operations.

Sriharikota Island lies about 18 km. off the mainland and is connected to it by an all-weather road running through Pulicat Lagoon. The Island is 56 km. long (N to S), and 9.6 km. at the broadest point. The vegetation of the area is classified as Tropical Dry Evergreen Scrub. Some of the more numerous species of trees and shrubs of the Island are, *Azadirachta indica, Ficus* sp., *Acacia* sp., *Strychnes nuxvomica, Terminalia arjuna, Gymnosperma montana, Ipomoea biloba, Zizyphus xylopyrus, Eucalyptus* spp., *Casuarina equestifolia, Prosopis juliflora* and *Anacardium occidentale.*

The team of BNHS scientists consisted of Mr. Prakash Rao, Mr. K.K. Mohapatra and Mr. V. Santharam. My family was visiting Sriharikota at the invitation of the head of photography, Mr. K. Seetharaman. On our arrival at Sriharikota on 18th April morning, after a quick wash and change, we proceeded to join the ringers. Santharam was operating just behind the guest house so first we went to meet him. He was in the process of ringing a Redwhiskered Bulbul *Pycnonotus jocosus* and a Blyth's Reed Warbler *Acrocephalus dumetorum*, and this was my baptism in bird ringing.

In the afternoon the entire team and ourselves went to a place called Peddavagu, a waterbody situated in the interior of the Island. Here we enjoyed seeing a Black Bittern *Ixobrychus flavicollis* through the reeds in which it was standing and a Greenshank *Tringa nebularia.* Here, using noose traps, a Median Egret *Egretta intermedia* was caught, ringed and released, not without a certain amount of caution because the bird was in a belligerent mood, possessing a large and sharp yellow beak and a most unerringly accurate aim.

The next morning we left Santharam working behind the guest house and accompanied Prakash and Mohapatra to a new place in the interior of Sriharikota. The nets here were to be set up in fairly thick scrub and Mohapatra proceeded to do that and at the same time very patiently answered my questions on the proper method of setting up mist nets. I learnt that on windy days the nets may yield a disappointing catch owing to their tendency to blow up when the wind catches them. Many other important points were also clarified by the scientists as we sat waiting for the nets to 'bear fruit'. And we did not have to wait for long. Hardly had we set them up and returned to our resting place near a tree, than we heard harsh alarm calls that heralded the capture of a bird. It was a Whitebrowed Bulbul *Pycnonotus luteolus*. A trapper retrieved it and brought it over to us.

It became clear that the bulbul objected strongly to the idea of being handled, ringed, measured and weighed. It proceeded to show its displeasure by biting our fingers in no friendly a fashion. In fact its beak carried quite a nip in it and on two occasions it drew blood. But having its stomach blown on when looking for a brood patch was the last straw. Its sharp little claws drove into Prakash's fingers and so tightly had it gripped that it had to be shaken off. Later I learnt that this species is a born fighter and all trapped specimens behave in much the same way as this one did. Moreover they possess a similar protective device as the lizards. When caught they react by shedding their feathers lavishly, particularly the down and tail feathers and if, in a morning you weigh three or four Whitebrowed Bulbuls then your weighing bag will contain enough feathers to make a bulbul out of shed feathers !

To resume the story, after the first bulbul was ringed and released we waited for further catches to pour in. Meanwhile, the birds, determined to entertain us began to pop up in front of our eyes. First some Grey Junglefowl *Gallus sonneratii*, then a Pitta *Pitta brachyura*, a few Grey Partridge *Francolinus pondicerianus*, a Plaintive Cuckoo *Cacomantis passerinus*. A short walk in the bush brought me upon a game track, studded with spoor of Jungle Cat *Felis chaus*, Jackal *Canis aureus* and Wild Boar *Sus scrofa*. Even the Peafowl *Pavo cristatus* called us up to say hello ! Before we could reply a chorus of alarm calls indicated that another Whitebrowed Bulbul had flown into the nets. This one was however an anti-climax. All it did in the way of protest was shed its feathers and in consequence was easier to handle. Later on two of its cousins the Redwhiskered Bulbul put in an appearance near the nets and were caught and ringed.

But now the day was getting warmer and we beat a hasty retreat to the guest house. In the evening, picking up Santharam we returned to Peddavagu. The three trappers proceeded to set up their noose traps near the waterbody's edge while we looked through binocs at the various waterbirds. A flotilla of Spotbills *Anas poecilorhyncha*, a Brahminy Kite *Haliastur indus*, Jacanas (Jacanidae), etc. Soon we found that the trappers had met with some success. A Spotted Sandpiper *Tringa glareola* had been caught. It was a friendly fellow and behaved in an exemplary fashion. On being released it took a 'bow' and strolled away towards the lake. Later a Pond Heron *Ardeola grayii* was ringed with some difficulty. Shortly after banding the heron we were thrilled to see the Black Bittern standing right in the middle of the lake and pretending to be a reed stalk. It was failing in this venture because there were no reeds where it was standing ! In any case this fact made for clear viewing so we did not tell him that it was standing only in an inch or so of water. In a short while however it discovered this fact itself and, in horror dived back into the shelter of the long reeds.

It was almost dark now and on our way back to the jeep we saw a pair of Jackals playing on the grassy edge of the lake. They could clearly see us as we stood on the road but for reasons best known to them they decided to pretend we were not there, this way they enjoyed themselves hugely. A Mongoose *Herpestes* sp., soon appeared and tried to join them in their play. Unfortunately the Jackals were not quite able to convince it of our non-existence and it soon withdrew. The Jackals too went off an so did we.

On 20th April, my family decided to see more of Sriharikota and so persuaded Mr. Seetharaman, a senior member of the SHAR Center to take them on a tour of the Island. I stayed back to attend ringing with Santharam behind the guest house. It was still dark at 0530 hrs., when I walked over to the hostel where Santharam was staying. On the way I met a Great Horned Owl *Bubo bubo* and a Nightjar *Caprimulgus* sp. Santharam had been waiting for me and after a cup of coffee at the mess, we set out for the work area. On the way a Shrike *Lanius* sp. stopped us. A similar bird had been banded by the BNHS team a few days earlier. However we could not be sure whether this individual was the same one as we only had a fleeting glimpse of the bird.

When we reached the nets, the first bird to be caught was a Blyth's Reed Warbler. Soon after a Spotted Dove *Streptopelia chinensis* was caught and ringed. The third one was a Whitebrowed Bulbul. Like my friend of the

previous day this one also bit and scratched with a vengeance and left a small snowstorm of feathers on our laps and notebooks. Its cousin the Redwhiskered Bulbul was our next star and it too decided to try its hand at biting. In consequence we suffered a few minor scratches.

After three or four birds there was a lull for half an hour. This time was ideal for birding. Our first bird was a Small Greenbilled Malkoha *Rhopodytes viridirostris*, followed rapidly by Magpie-Robin *Copsychus saularis*, Babblers *Turdoides* sp., etc. We also saw a small Monitor Lizard *Varanus* sp. Then a small bird of partridge ancestry began to scuttle about in front of us. After ten minutes of trying to fix him in our binocs we stopped to wipe the sweat from our faces. While we were mopping our faces he suddenly came out in front of us and surveyed us suspiciously. The blue legs and mottled brown plumage identified it as a male Bluelegged Bustard-Quail *Turnix suscitator*. That was a fine sighting as it was a new bird for me.

Now the trapper returned with a fresh bag of birds. A Redwhiskered Bulbul was the first. It gave no trouble. Next a Whiteheaded Babbler *Turdoides affinis*. It allowed us to ring and measure, but when we tried to put him in the weighing bag, he turned, squirmed through Santharam's fingers and said goodbye. That was our last bird. We took down the nets and went back to the guest house. The family had returned from their tour of the Island and had had the exciting experience of being nearly swarmed by honey bees !

In the afternoon we went to the northern tip of the Island where there were a few small waterbodies (now marshes due to the hot weather). Here we saw Brahminy Kites, Curlew *Numenius arquata* Grey Plovers *Pluvialis squatarola* and Grey Heron *Ardea cinerea*. Also a Whimbrel *Numenius phaeopus*. There were three species of terns, the Caspian *Hydroprogne caspia*, Gullbilled *Gelochelidon nilotica* and Whiskered *Chlidonias hybrida* and one gull with a black head. Four Grey Pelican *Pelecanus philippensis* also flew over. As a reward for braving the fierce afternoon heat we managed to noose a Kentish Plover *Charadrius alexandrinus* which was ringed and released.

On 21st morning my family left for Madras. I shifted from the guest house to the hostel and settled in with Santharam in his room. The hostel in-charge had evidently decided to keep both bird-brains in one pen to avoid endangering the other hostel occupants. That afternoon we went to a place called Pennubakkam where there is good scrub cover. However we were primarily involved in setting up the mist net poles and so we did not try to do

any ringing that afternoon. But we did manage to put up ten sets of poles and here again I learnt some techniques for setting up the nets. Some distance away we saw a Whitebellied Sea Eagle *Haliaeetus leucogaster* at its nest. The nest was constructed on a electricity pylon about 50 feet off the ground. That night I prowled around the hostel with a torch and saw Spotted Owlets *Athene brama* and Great Horned Owls and Night Herons *Nycticorax nycticorax*.

The 22nd of April being a Sunday was an off day from ringing because the trappers insisted on a weekly holiday. So I just went on short walks in the morning and evening by myself. I saw Grey and Painted Partridge *Francolinus pictus*, Peafowl, Bustard-Quail, and two Red Junglefowl *Gallus gallus*. It was not possible to determine whether these were actually wild or escaped 'domesticated' birds of the villagers living on the Island. (Editor's Note: Sriharikota is too far south of the normally reported range of *Gallus gallus*). Also I was witness to a small natural tragedy where I saw a Jungle Cat stalk, ambush and finally kill a Whiteheaded Babbler just outside my window.

On 23rd April we returned to Pennubakkam. There I was lucky enough to see the Forest Wagtail *Motacilla indica* and a Hoopoe *Upupa epops*. Parakeets and bulbuls also flew around us. We set up the ten nets that we had prepared on 21st. In these were caught a rich variety of birds. Within one hour, six birds had been caught. These were a Tailor Bird *Orthotomus sutorius*, which was quite vicious and bit me sharply as I ringed and measured it. Next was a female Iora *Aegithina tiphia* and she almost escaped because I was dazzled by her rich yellowish-green plumage and almost dropped her. However she put up no resistance. Next came a pair of Redwhiskered Bulbuls and finally my old friends the Whitebrowed Bulbuls. There were two of them and they were so vocally indignant that we were almost deafened. An hour later we ringed another Whitebrowed Bulbul, a Redwhiskered Bulbul an a male Magpie-Robin *Copsychus saularis* and then packed up and returned for breakfast.

The evening was even better than the morning. In rapid succession we ringed a Redwhiskered Bulbul, a male Purple Sunbird *Nectarinia asiatica* and then a Whitebrowed Bulbul. We saw a Dusky Redshank *Tringa erythropus* and a Painted Stork *Mycteria leucocephala* in a small lake nearby. Then we caught and ringed a Blyth's Reed Warbler, a female Iora, three Whitebrowed Bulbuls, two Redwhiskered Bulbuls and a Tailor Bird in one continuous burst of activity. On the way back home we saw a Pied Kingfisher *Ceryle rudis*.

On 24th morning we again went to Pennubakkam. This was to be my last ringing trip and almost as if nature was giving me a last treat we caught 16 birds in under three hours. In fact it was a struggle for me and Santharam to keep up with the continuous flow of birds the trappers were bringing in. There were Whitebrowed and Redwhiskered Bulbuls, Tailor Birds, Blyth's Reed Warbler and Common Ioras.

A last surprise for me was the sighting of the Shama *Copsychus malabaricus*. Santharam said that they had caught and ringed Shamas in that area before but this was a feather in my cap as it was my first sighting of the bird.

I left Sriharikota that afternoon and took a bus to Madras. As the bus passed Pulicat, I saw a small flock of Stints *Calidris minuta* and Sandpipers (Scolopacidae) in a small pool of water. I thought sadly of the past week, sadly because now it was over and I was returning to 'civilisation'. As I passed the Pulicat Sanctuary's outpost and the bus began to speed up, it passed a solitary Whitebrowed Bulbul, screaming loudly. I wondered if my old friend had come to bid me good-bye !

SYSTEMATIC LIST OF THE BIRDS SEEN AT SRIHARIKOTA ISLAND

SPOTTEDBILLED PELICAN *Pelecanus philippensis*
LARGE CORMORANT *Phalacrocorax carbo*
LITTLE CORMORANT *P. niger*
GREY HERON *Ardea cinerea*
POND HERON *Ardeola grayii*
CATTLE EGRET *Bubulcus ibis*
MEDIAN EGRET *Egretta intermedia*
LITTLE EGRET *E. garzetta*
NIGHT HERON *Nycticorax nycticorax*
BLACK BITTERN *Ixobrychus flavicollis*
PAINTED STORK *Mycteria leucocephala*
SPOTBILL DUCK *Anas poecilorhyncha*
PARIAH KITE *Milvus migrans*
BRAHMINY KITE *Haliastur indus*
TAWNY EAGLE *Aquila rapax*
WHITEBELLIED SEA EAGLE *Haliaeetus leucogaster*
WHITEBACKED VULTURE *Gyps bengalensis*
PAINTED PARTRIDGE *Francolinus pictus*
GREY PARTRIDGE *F. pondicerianus*
JUNGLE BUSH QUAIL *Perdicula asiatica*
RED JUNGLEFOWL *Gallus gallus*
GREY JUNGLEFOWL *G. sonneratii*
PEAFOWL *Pavo cristatus*
INDIAN BUSTARD-QUAIL *Turnix suscitator*
WHITEBREASTED WATERHEN *Amaurornis phoenicurus*
INDIAN MOORHEN *Gallinula chloropus*
PHEASANT-TAILED JACANA *Hydrophasianus chirurgus*
REDWATTLED LAPWING *Vanellus indicus*
GREY PLOVER *Pluvialis squatarola*
KENTISH PLOVER *Charadrius alexandrinus*
LESSER SAND PLOVER *C. mongolus*
WHIMBREL *Numenius phaeopus*
CURLEW *N. arquata*
SPOTTED REDSHANK *Tringa erythropus*

GREENSHANK *T. nebularia*
SPOTTED SANDPIPER *T. glareola*
COMMON SANDPIPER *T. hypoleucos*
LITTLE STINT *Calidris minuta*
PAINTED SNIPE *Rostratula benghalensis*
BLACKHEADED GULL *Larus ridibundus*
WHISKERED TERN *Chlidonias hybrida*

GULLBILLED TERN
Gelochelidon nilotica
CASPIAN TERN *Hydroprogne caspia*
INDIAN RIVER TERN *Sterna aurantia*
SPOTTED DOVE *Streptopelia chinensis*
ROSERINGED PARAKEET
Psittacula krameri
BLOSSOMHEADED PARAKEET
P. cyanocephala
PIED CRESTED CUCKOO
Clamator jacobinus
SMALL GREENBILLED MALKOHA
Rhopodytes viridirostris
COUCAL *Centropus sinensis*
GREAT HORNED OWL *Bubo bubo*
SPOTTED OWLET *Athene brama*
COMMON INDIAN NIGHTJAR
Caprimulgus asiaticus
HOUSE SWIFT *Apus affinis*
PALM SWIFT *Cypsiurus parvus*
LESSER PIED KINGFISHER *Ceryle rudis*
SMALL BLUE KINGFISHER *Alcedo atthis*
WHITEBREASTED KINGFISHER
Halcyon smyrnensis
INDIAN ROLLER *Coracias benghalensis*
HOOPOE *Upupa epops*
INDIAN PITTA *Pitta brachyura*
PHILIPPINE SHRIKE
Lanius cristatus lucionensis
BLACK DRONGO *Dicrurus adsimilis*
COMMON MYNA *Acridotheres tristis*
HOUSE CROW *Corvus splendens*
JUNGLE CROW *C. macrorhynchos*
COMMON IORA *Aegithina tiphia*
JERDON'S CHLOROPSIS
Chloropsis cochinchinensis
REDWHISKERED BULBUL
Pycnonotus jocosus
REDVENTED BULBUL *P. cafer*
WHITEBROWED BULBUL *P. luteolus*
WHITEHEADED BABBLER
Turdoides affinis
PLAIN PRINIA *Prinia subflava*
ASHY PRINIA *P. socialis*
JUNGLE PRINIA *P. sylvatica*
TAILOR BIRD *Orthotomus sutorius*
BLYTH'S REED WARBLER
Acrocephalus dumetorum
MAGPIE-ROBIN *Copsychus saularis*
SHAMA *C. malabaricus*
INDIAN ROBIN *Saxicoloides fulicata*
FOREST WAGTAIL *Motacilla indica*
PURPLERUMPED SUNBIRD
Nectarinia zeylonica
PURPLE SUNBIRD *N. asiatica*
HOUSE SPARROW *Passer domesticus*

BNHS BIRD-RINGING DATA SHEET

S. No.	SPECIES	SEX	DATE	RING SIZE	RING No.
1	*Pycnonotus jocosus*		18-04-1990	AB	-
2	*Acrocephalus dumetorum*		-do-	A	-
3	*Egretta intermedia*		-do-	F	-
4	*Pycnonotus luteolus*		19-04-1990	AB	123458
5	*P. luteolus*		-do-	AB	123459
6	*P. jocosus*		-do-	AB	123460
7	*P. jocosus*		-do-	AB	123461
8	*Tringa glareola*		-do-	AB	135208
9	*Ardeola grayii*		-do-	F	46676
10	*Acrocephalus dumetorum*		20-04-1990	A	232199
11	*Streptopelia chinensis*		-do-	C	65804
12	*Pycnonotus luteolus*		-do-	AB	135410

S. No.	SPECIES	SEX	DATE	RING SIZE	RING No.
13	*P. jocosus*		-do-	AB	135411
14	*P. jocosus*		-do-	AB	135412
15	*Turdoides affinis*		-do-	B	65273
16	*Charadrius alexandrinus*		-do-	AB	135209
17	*Orthotomus sutorius*	M	23-04-1990	Z	41041
18	*Aegithina tiphia*	F	-do-	A	229194
19	*Pycnonotus jocosus*		-do-	AB	123464
20	*P. luteolus*		-do-	AB	123465
21	*P. luteolus*		-do-	AB	123467
22	*P. jocosus*		-do-	AB	123467
23	*P. jocosus*		-do-	AB	123468
24	*Copsychus saularis*	M	-do-	AB	123469
25	*Pycnonotus luteolus*		-do-	AB	123470
26	*P. jocosus*		-do-	AB	123471
27	*Nectarinia asiatica*	M	-do-	Z	41042
28	*Pycnonotus luteolus*		-do-	AB	123472
29	*Acrocephalus dumetorum*		-do-	A	229195
30	*Aegithina tiphia*	F	-do-	A	229196
31	*Pycnonotus luteolus*		-do-	AB	123473
32	*P. luteolus*		-do-	AB	123474
33	*P. luteolus*		-do-	AB	123475
34	*P. jocosus*		-do-	AB	123476
35	*P. jocosus*		-do-	AB	123477
36	*P. jocosus*		24-04-1990	AB	135413
37	*Orthotomus sutorius*	M	-do-	Z	41043
38	*Pycnonotus luteolus*		-do-	AB	135414
39	*Acrocephalus dumetorum*		-do-	A	232200
40	*Pycnonotus jocosus*		-do-	AB	135415
41	*P. jocosus*		-do-	AB	135416
42	*P. jocosus*		-do-	AB	135417
43	*P. luteolus*		-do-	AB	135418
44	*P. jocosus*		-do-	AB	135419
45	*P. jocosus*		-do-	AB	135420
46	*P. luteolus*		-do-	AB	135421
47	*P. luteolus*		-do-	AB	135422
48	*P. luteolus*		-do-	AB	135423
49	*Orthotomus sutorius*	F	-do-	Z	27051
50	*Pycnonotus luteolus*		-do-	AB	135424
51	*P. luteolus*		-do-	AB	135425
52	*Aegithina tiphia*	F	-do-	A	229201

Key: In the 'Sex column, M=male ; F=female. In the 'Ring Size' column the alphabets given are the different ring sizes used by the BNHS.

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Address for correspondence:
2-B Atlas Apartments, Road No. 10 Banjara Hills, Hyderabad 500 034.

GREAT INDIAN BUSTARD *Ardeotis nigriceps*

ADAPTATIONS IN NESTING SITES AND MATERIALS IN HOUSE CROW *CORVUS SPLENDENS* AND PARIAH KITE *MILVUS MIGRANS*

SIRAJ AHMED TAHER

While travelling by train from one big city to another, one can see all along the electrified sections of the railway tracks that most of the pylons supporting the electric cable lines have become nesting sites for birds. In the absence of trees, these structures are functioning as artificial trees. Observations along railway tracks in south India have shown a great percentage of these nests to be either of a crow *Corvus* sp. or myna *Acridotheres* sp. and an occasional kite *Milvus* sp. With the shortage of natural nesting sites, there is evidently a great shortage of nesting materials also.

In a normal type of nest of the House Crow *Corvus splendens*, Salim Ali (1972) states "the nest consists of a platform of twigs, sometimes include iron wire, with a cup-like depression lined with coir, fibre, etc., ... sometimes several in the same tree ... the Koel *Eudynamys scolopacea* commonly lays it's eggs in a crows' nest." E. H. Aitken (1927) also writes "In April / May, crows make nests of sticks, lines with coir or horse hair taken from mattresses or even with soda-water caps from the butler's pantry. By June they bring forth 3 or 4 criminals in their own image. Normally in rural areas the House Crows build nests with only dry twigs, dry sharp thorny branches. The cup inside is lines with fibre, pliable sticks, rags and the like."

For a very long time the *Corvus* sp., especially the House Crow, has been known to have made use of both man-made nesting sites as well as artificial materials for their nests. Several observers have mentioned about this in their notes and articles, A.O. Hume (1889), E.H. Aitken (1927), D. Dewar (1929), Salim Ali (1922, 1972), Walsh (1924). In non-Indian crows, eg., *Corvus corone*, Walford (1931) reports the use of steel wire in the nest-building, besides rabbit bones and wool for lining. Some other birds which have been recorded to have used, partly or wholly iron / steel or along with twigs, plastic wires and strips, bottle caps, cloth, etc., are the doves, kites and bulbuls. Since these reports, the situation in big cities of India has apparently changed for many birds, of which the House Crow is one such. This is one bird which seems to have adapted itself quite admirably and it is for this reason that these notes and observations are being reported.

One such nest of a House Crow was found lying on a road in Banjara Hills, Hyderabad, sometime in the month of September 1988. It had probably been blown down by a very strong wind 2 days earlier. At first it seemed to have been made entirely of steel wires, but on a closer look it did have some twigs, small sticks, a few strips of plastic strings and tape. It even had one soft drink bottle cap (Limca !) stuck between the wires. There was hardly any soft material or lining at the bottom of the cup; probably having been washed-off in the rain.

A second similar nest was found by a friend in the Sanathnagar Industrial Area and given to me. This crow seemed either austere or poor .... it's nest had a soda bottle cap !!

The weight, size and other details of these nests are given in Table I and II at the end of this note.

In 1989, a fellow birdwatcher, Mr. Aziz, brought a half-completed nest of a Pariah Kite *Milvus migrans* which he had found lying on the ground under a mango tree in his garden. This one too had probably been blown down on a gusty day. Tables III and IV give the data from this nest.

DISCUSSION

No proper or meaningful studies can be made from studying 2 or 3 nests fallen on the ground. Nevertheless some interesting points for discussion do arise.

The use of wire or other types of materials depends mostly on the availability of such material in the vicinity of the nesting sites. Apparently a learning process may also be involved here in the sense of handing over the 'metal habit' from crow to crow, from parent to young. They normally do not carry the material over long distances and thicker wires are avoided. This because the thicker wires will be heavier to carry and also less pliable to be given the required shape.

Some of the advantages and disadvantages as seem obvious are:

1. A nest of a more permanent nature and greater stability means less labour and saves time which could be better spent for gathering food or scavenging.

2. A wire nest which is more airy than a nest made of twigs and sticks alone, may be less hot and this may protect the young from the heat of summer. The wire nest may also be less hot during incubation.
3. Some man-made niches may be more convenient for 'metal' nests. Similarly, building nests on lamp posts and billboards could mean an extension of feeding time. Ingenious that the bird is, the crow may use these nests as perches to pick up food from passing trucks or at the market places.
4. The one possible disadvantage is that the eggs during incubation could be affected by the heat conducted by the wires. So also the nestlings, naked in the first few weeks could be burnt, singed or affected otherwise. One other possibility is that the excess heat of the metal in the nest and the incubation provided together by the parents, could result in unhatched or addled eggs.

In the present times, when the environment is changing so fast or is being destroyed, it is quite interesting to see some birds try to adapt themselves so well to these fast changes. No better example of this than the House Crow - the smart one ! All those birds which can adapt themselves to these rapid changes are most likely to survive and thrive, or else - they may go the way of the Dodo. Our friend, the House Crow, at least for the time being is not going to be one of them !

NESTS OF HOUSE CROW *CORVUS SPLENDENS* DETAILS OF TWO 'MIXED' NESTS FROM HYDERABAD

TABLE I

Nest No.	Total Weight (gms)	Weight of Iron / steel wires (gms)	Weight of sticks (gms)	Weight of plastic & other materials (gms.)
1.	3270	3105	135	30
2.	3960	3725	190	45

- All weights approximated to nearest 5 gms.
- Not possible to count the number of sticks.

TABLE II

Nest No.	Size of nest (mm)	No. of iron / steel wires	Total length of wires (mt.)	Average thickness of wires	Variations in length of wires
1.	230 dia. 160 ht / depth	467	10.2	1.7 mm.	15-30 cm. (per piece)
2.	310 dia. 185 ht / depth	582	11.6	1.5 mm.	12-25 cm. (per piece)

NEST OF PARIAH KITE *MILVUS MIGRANS* ONE INCOMPLETE NEST (ABOUT HALF) FROM HYDERABAD

TABLE III

Total weight of nest (gms.)	Weight of iron / steel wires (gms.)	Weight of sticks (gms.)	Weight of plastic & other material (gms.)
c. 4400	2890	1355	55

- All weights approximated to nearest 5 gm.
- Not possible to count the number of sticks.

TABLE IV

Size of nest (mm)	No. of iron / steel wires	Total length of wires (mt.)	Average thickness of wires (mm)	Variations on length of wires
550 dia. 330 ht / depth	870	26.1	2.0	10-45 cm per piece.

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BIRDING IN MAHBUBNAGAR DISTRICT, ANDHRA PRADESH

HUMAYUN TAHER

During the 1989 waterfowl count in January, Aasheesh Pittie, my father (Siraj Taher) and I went to survey a few waterbodies in Mahbubnagar district. This was on the 26th of January 1989. Our primary objective was Makthal Lake about 40 km. from Mahbubnagar town from where there was an unconfirmed report of 30 to 40 Blacknecked Storks *Ephippiorhynchus asiaticus* having being seen in December 1988.

We started from Hyderabad at about 05:00 hours on a long drive hoping for a pleasant and fruitful day. When visibility improved at around 06:15 hours, there seemed to be a sudden spurt in the bird life all along the road on both sides. Doves and quails were pecking at grit and grains on the highway. At one spot we saw six different species of babblers together - a mixed hunting party (?). Lorries carrying grain had travelled along the highway and as a result the gramnivores were pecking busily at the grain spilt on the road.

We reached Mahbubnagar town around 08:00 hours and after visiting the DFO, Mr. Govind Rao, we proceeded to the first lake on our list, Devarkadra. This was a small village lake about 10 km. from Mahbubnagar. It seemed to have a fair amount of birdlife. To investigate further the species and numbers, we quickly shouldered our bags, checked the binocs and crept up to the edge of the water.

There were quite a few species of water birds on the lake including the Black *Pseudibis papillosa* and White Ibis *Threskiornis aethiopica*, Openbilled Storks *Anastomus oscitans* and a few Cotton Teal *Nettapus coromandelianus*. Some Painted Snipe *Rostratula benghalensis* and a few Shovellers *Anas clypeata* were flushed out of the reeds. After counting some 20 species of birds at this place, we pushed on.

Our next stop was Koilsagar barrage. This is situated some 12 km. off the highway. This road was rough and necessitated a slow drive. One advantage of this slow speed was that we observed many birds in the trees on either side of the road. A Shikra *Accipiter badius* and an unidentified small falcon (Kestrel *Falco tinnunculus* ??) were disturbing a party of sparrows and warblers while further on a Hoopoe *Upupa epops* rose right in front of the car

and sped away to the right with a manoeuvre that can only be called breathtaking !

On reaching Koilsagar, we saw that the waterspread was quite considerable. Birds were seen only on the fringes of the lake opposite the bund. Here we observed some 5,000 + Pintail *Anas acuta* interspersed with Brahminy Ducks *Tadorna ferruginea* and some Common Teals *Anas crecca.* Waders were few but after some 45 sweaty minutes we recorded about 10 species of birds.

After a short rest at Koilsagar inspection bungalow, where we investigated boiled potatoes and tomato 'chutney', we pushed on towards Makthal. However another small and inviting roadside village tank called for a halt and we went up. Here we saw some 70 Painted Snipe and a few ibis and storks. Also a few Spotbill Ducks *Anas poecilorhyncha.*

From this lake to Makthal the scenery was mostly flooded paddy fields. In one such field, which was not yet sown, we saw a large concentration of waders. Out of these, some 90 % were Ruffs *Philomachus pugnax* and with them were a few Stints *Calidris minuta* and sandpipers. There were also a few Blackwinged Stilts *Himantopus himantopus.*

We eventually reached Makthal at around 16:15 hours. it was a largish village tank whose bund hugged the road. Here we noted Whitenecked Storks *Ciconia episcopus*, Black and White Ibis, Cotton Teal, Pintail, Spotbill Ducks, Blackwinged Stilts, cormorants and sandpipers, Coots *Fulica atra*, Dabchicks *Podiceps ruficollis*, Pond Herons *Ardeola grayii* and egrets. But alas - no Blacknecked Storks !

That was the last lake. Having finished it we retraced our way towards the city and were treated to the most enchanting sight of a covey of Grey Partridge *Francolinus pondicerianus* and their young crossing the road slowly and with great dignity. We reached the city at 20:30 hours and felt very satisfied with our most exciting birding trip. A list of birds seen in Mahbubnagar district is given below.

DABCHICK *Podiceps ruficollis*
LITTLE CORMORANT *Phalacrocorax niger*
CATTLE EGRET *Bubulcus ibis*
LARGE EGRET *Ardea alba*
MEDIAN EGRET *Egretta intermedia*
LITTLE EGRET *E. garzetta*
GREY HERON *Ardea cinerea*
POND HERON *Ardeola grayii*
OPENBILLED STORK *Anastomus oscitans*
WHITENECKED STORK

Ciconia episcopus
BLACK IBIS *Pseudibis papillosa*
WHITE IBIS *Threskiornis aethiopica*
BRAHMINY DUCK *Tadorna ferruginea*
SPOTBILL DUCK *Anas poecilorhyncha*
GARGANEY *A. querquedula*
PINTAIL *A. acuta*
SHOVELLER *A. clypeata*
COMMON TEAL *A. crecca*
COTTON TEAL
Nettapus coromandelianus
MARSH HARRIER *Circus aeruginosus*
MONTAGU'S HARRIER *C. pygargus*
BLACKWINGED KITE *Elanus caeruleus*
PARIAH KITE *Milvus migrans*
SHIKRA *Accipiter badius*
WHITEBACKED VULTURE
Gyps bengalensis
KESTREL *Falco tinnunculus*
GREY PARTRIDGE
Francolinus pondicerianus
COMMON QUAIL *Coturnix coturnix*
PURPLE MOORHEN *Porphyrio porphyrio*
WHITEBREASTED WATERHEN
Amaurornis phoenicurus
PAINTED SNIPE *Rostratula benghalensis*
BLACKWINGED STILT
Himantopus himantopus
REDWATTLED LAPWING
Vanellus indicus
YELLOW-WATTLED LAPWING
V. malabaricus
LITTLE RINGED PLOVER
Charadrius dubius
KENTISH PLOVER *C. alexandrinus*
GREENSHANK *Tringa nebularia*
COMMON SANDPIPER *T. hypoleucos*
WOOD SANDPIPER *T. glareola*
LITTLE STINT *Calidris minuta*
RUFF *Philomachus pugnax*
RIVER TERN *Sterna aurantia*
LITTLE BROWN DOVE
Streptopelia senegalensis
SPOTTED DOVE *S. chinensis*
ROSERINGED PARAKEET
Psittacula krameri
KOEL *Eudynamys scolopacea*
SMALL BLUE KINGFISHER *Alcedo atthis*
PIED KINGFISHER *Ceryle rudis*
WHITEBREASTED KINGFISHER
Halcyon smyrnensis
ROLLER *Coracias benghalensis*
HOOPOE *Upupa epops*
ASHYCROWNED FINCH-LARK
Eremopterix grisea
BLACK DRONGO *Dicrurus adsimilis*
COMMON MYNA *Acridotheres tristis*
BRAHMINY MYNA *Sturnus pagodarum*
HOUSE CROW *Corvus splendens*
REDVENTED BULBUL *Pycnonotus cafer*
COMMON BABBLER *Turdoides caudatus*
JUNGLE BABBLER *T. striatus*
LARGE GREY BABBLER *T. malcolmi*
WHITEHEADED BABBLER *T. affinis*
YELLOWEYED BABBLER
Chrysomma sinense
RUFOUSBELLIED BABBLER
Dumetia hyperythra
TAILOR BIRD *Orthotomus sutorius*
ASHY PRINIA *Prinia socialis*
INDIAN ROBIN *Saxicoloides fulicata*
GREY WAGTAIL *Motacilla cinerea*
WHITE WAGTAIL *M. alba*
LARGE PIED WAGTAIL
M. maderaspatensis
PURPLE SUNBIRD *Nectarinia asiatica*
BAYA *Ploceus philippensis*
STREAKED WEAVER *P. manyar*
WHITETHROATED MUNIA
Lonchura malabarica
HOUSE SPARROW *Passer domesticus*

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Address for correspondence: 2-B Atlas Apartments, Road No. 10 Banjara Hills, Hyderabad 500 034.

A TRIP TO ANANTAGIRI

B. DASARATHI

LOCATION: Anantagiri, Rangareddi District, Andhra Pradesh, about 80 km. from Hyderabad.

DATE OF VISIT: 14th and 15th July 1990.

DESCRIPTION: Elevation 692 mt. (2,096 ft.) absl. A reserve forest located among hills and deep valleys covered with dense jungle of mixed and dry deciduous flora. Dominant tree is Teak *Tectona grandis*. There is a wide variety of avifauna and insect life. Status of mammals is not known. Famous for its T.B. Sanatorium and as a picnic spot.

The above location was known to the Birdwatchers as potentially rich in bird life. A number of trips were made earlier sporadically over the years. This trip was different as it's basic motive was to explore the surrounding areas.

We reached the forest guest house at Anantagiri on 14th evening at about 4:00 p.m. On the walk down from the bus-stand to the guest house, we saw a pair of Mahratta Woodpeckers *Picoides mahrattensis* and could guess what was in store for us. That evening it rained in sheets and we couldn't step out.

Next morning we were up in time to hear the early sounds of the forest. The first bird to call was the Peafowl *Pavo cristatus*, then a Tickell's Blue Flycatcher *Muscicapa tickelliae* - soon the forest around us was filled with sounds. We were soon out into the field. We were to explore a valley nearby which was recently 'discovered' by our members. On the walk down we could watch for some time a family of Treepies *Dendrocitta vagabunda* out for an early meal. Obviously it was 'family time' for most of the birds. Further down the path some of us saw some real action. A Crested Hawk-Eagle *Spizaetus cirrhatus* was being mobbed by crows. For a brief moment we could see its striking wing pattern and the crest was very prominent. A few moments later we saw it being chased off into the forest.

Soon we were in the valley. Here we had a wonderful opportunity to observe a White-eye *Zosterops palpebrosa* feed a youngster in the nest, while a Whitebellied Drongo *Dicrurus caerulescens* sallied overhead. On an eucalyptus nearby, we could see a Pied Crested Cuckoo *Clamator jacobinus*

sing. Nearby we heard the Whitethroated Ground Thrush *Zoothera citrina* pour forth its marvellous song. Further down the path we could see it sing. Soon we could hear a second bird reply. We saw another nest of a White-eye, with an adult incubating day-old chicks and a turquoise blue egg. We also observed the nest of a Whitethroated Munia *Lonchura malabarica*. We then walked back to the guest house. After light refreshments we were out again.

We wanted to investigate the part of reserve forest which is marked as "Dense mixed jungle, mainly teak" according to the G.S.I. survey of 1966-67. The approach road to this area turns off to the right outside the village of Keruwalli. The road which had been marked as a dirt track was now covered with tar ! As we approach the area, there is a lake on the left side. It took a bit of rough riding to reach the area. We could see that quite a bit of the area designated as above had been cleared of its tree cover. There was only thin scrub all over the place. The soil was very thin (about 2 inches) with the underlying layer being a typical Deccan lava flow. Further up the path we could see jungle which was virtually untouched. We wanted to investigate what looked like an eyrie on a hill nearby. Though we could not reach the spot because of dense undergrowth, we were amply rewarded on our way back. As we approached a nearby stream, we saw a group of Whiteheaded Babblers *Turdoides affinis* on the bank o the stream. We could observe a male Baya *Ploceus philippensis* weave a strand of grass into his nest. A Small Blue Kingfisher *Alcedo atthis* flashed past us. Then we followed the stream to get back. On the way back to Anantagiri, we could see a Whitenecked Stork *Ciconia episcopus* on the shore of a lake and a Lesser Whistling Teal *Dendrocygna javanica*. Further down the road we could see some magnificent stands of teak. Then we returned to our guest house, had lunch and were on our way back to Hyderabad.

This area is to a very large extent unexplored, therefore very little is known about this region. It is our hope that further investigations will yield rich fruit.

A LIST OF BIRDS SEEN AT ANANTAGIRI

DABCHICK *Podiceps ruficollis*
WHITENECKED STORK
Ciconia episcopus
LESSER WHISTLING TEAL
Dendrocygna javanica
PARIAH KITE *Milvus migrans*
SHIKRA *Accipiter badius*
CRESTED HAWK-EAGLE
Spizaetus cirrhatus
BONELLI'S EAGLE *Hieraaetus fasciatus*
GREY PARTRIDGE
Francolinus pondicerianus

RAIN QUAIL *Coturnix coromandelica*
INDIAN PEAFOWL *Pavo cristatus*
REDWATTLED LAPWING
Vanellus indicus
SPOTTED DOVE *Streptopelia chinensis*
LITTLE BROWN DOVE *S. senegalensis*
ROSERINGED PARAKEET
Psittacula krameri
BLOSSOMHEADED PARAKEET
P. cyanocephala
PIED CRESTED CUCKOO
Clamator jacobinus
PLAINTIVE CUCKOO
Cacomantis merulinus
KOEL *Eudynamys scolopacea*
HOUSE SWIFT *Apus affinis*
PALM SWIFT *Cypsiurus parvus*
CRESTED TREE SWIFT
Hemiprocne longipennis
LESSER PIED KINGFISHER *Ceryle rudis*
SMALL BLUE KINGFISHER *Alcedo atthis*
WHITEBREASTED KINGFISHER
Halcyon smyrnensis
HOOPOE *Upupa epops*
GREY HORNBILL *Tockus birostris*
COPPERSMITH
Megalaima haemacephala
GOLDENBACKED WOODPECKER
Dinopium benghalense
PYGMY WOODPECKER *Picoides nanus*
MAHRATTA WOODPECKER
P. mahrattensis
ASHYCROWNED FINCH-LARK
Eremopterix grisea
COMMON SWALLOW *Hirundo rustica*
GREYBACKED SHRIKE *Lanius schach*
GOLDEN ORIOLE *Oriolus oriolus*
BLACK DRONGO *Dicrurus adsimilis*
WHITEBELLIED DRONGO
D. caerulescens
BRAHMINY MYNA *Sturnus pagodarum*
COMMON MYNA *Acridotheres tristis*
TREE PIE *Dendrocitta vagabunda*
HOUSE CROW *Corvus splendens*
JUNGLE CROW *C. macrorhynchos*
BLACKHEADED CUCKOO-SHRIKE
Coracina melanoptera
SMALL MINIVET
Pericrocotus cinnamomeus
COMMON IORA *Aegithina tiphia*
REDVENTED BULBUL *Pycnonotus cafer*
WHITEBROWED BULBUL *P. luteolus*
RUFOUSBELLIED BABBLER
Dumetia hyperythra
JUNGLE BABBLER *Turdoides striatus*
TICKELL'S BLUE FLYCATCHER
Muscicapa tickelliae
WHITEBROWED FANTAIL
FLYCATCHER *Rhipidura aureola*
PARADISE FLYCATCHER
Terpsiphone paradisi
ASHY PRINIA *Prinia socialis*
JUNGLE PRINIA *P. sylvatica*
TAILOR BIRD *Orthotomus sutorius*
MAGPIE-ROBIN *Copsychus saularis*
INDIAN ROBIN *Saxicoloides fulicata*
WHITETHROATED GROUND THRUSH
Zoothera citrina
GREY TIT *Parus major*
PURPLE SUNBIRD *Nectarinia asiatica*
PURPLERUMPED SUNBIRD *N. zeylonica*
WHITE-EYE *Zosterops palpebrosa*
BAYA *Ploceus philippensis*
YELLOWTHROATED SPARROW
Petronia xanthocollis
WHITETHROATED MUNIA
Lonchura malabarica
SPOTTED MUNIA *L. punctulata*

MONOGAMY, POLYGAMY AND POLYANDRY - AN AVIAN PERSPECTIVE

VINAY TOTAWAR

A close scrutiny of the definitions (see Appendix) of the terms monogamy, polygamy and polyandry in *The Concise Oxford Dictionary of Current English* (COD), the *Oxford Advanced Learner's Dictionary of Current English* (OALD), the *Longman Dictionary of Contemporary English* (LDCE), *The Oxford Reference Dictionary* (ORD) reveals that the understanding of these words or their perception by the native speakers of English or of speakers of any given language is not conditioned by the institution of marriage as the *Homo sapiens* understand it today with all its ceremonial pomp and show as well as its legal and temporal implications. The dictionary definitions seem to refer to the number of mates (male and female) at any given time and are not specific about the temporal frame. But in the context of humans the general perception seems to be covertly linked to the institution of marriage and would then have to be more precisely defined in terms of "the number of mates (male or female) within the framework of one marriage, ie., whether the institution of marriage allows one or more than one mates."

Therefore, when social practices allow an individual to take more than one mate at any given time we talk of polygamy or polyandry (polygamy - in case of more than one female mate, and polyandry - in case of more than one male mate). With the exception of divorce or when one of the partners deceases, the relationship is for life, in most societies.

The avian world also confirms the practice of *monogamy, polygamy* and *polyandry*. Nevertheless, in the absence of an elaborate social structure like that of the *Homo sapiens*, of a Law enforcement machinery and in the light of the survival rate of humans the temporal frame of the partnership phenomenon in birds has to be understood differently. In humans the relationship is perceived to be for lifetime (adultery cases apart!), but as for birds one can talk about the relationship only for the given breeding season as detailed studies of socio-sexual behaviour of a particular pair of birds of a particular species over a long period of time are not available (birds have neither permanent houses, nor permanent addresses !).

Hence, while looking at the phenomena of polygamy, polyandry and monogamy in birds, the criterion should be the *presence of one or many mates simultaneously during the same breeding season.*

Most bird species practise monogamy for the duration of the given breeding season, e.g., sparrows, crows, hornbills, etc. Whereas most ducks (not in captivity) are believed to pair for life. However, the 'widows' and the 'widowers' do re-marry (Aapte, 1964).

Closest to the monogamy of humans are the Sarus Crane *Grus antigone*, Mute Swan *Cygnus olor*, Common Raven *Corvus corax*, as they are believed to pair for life. The most illustrious, from an Indian perspective, of all of them is the Sarus Crane. Their deep bondage is a well-known fact. In fact the death of one of a pair and the 'pangs of pain' of the survivor due to 'separation' and / or 'loss' of the partner had inspired the poet Vaalmiki to write one of the greatest Indian epics *The Raamaayan*. Sarus Cranes choose each other for life and in the even of death of one of the partners the other is found to 'starve' itself to death (Aapte, 1964).

The Indian Red Junglefowl *Gallus gallus* also live with the same partner once the cock pairs with one of the hens (S. Vaarghade, 1994).

Polygamy is not a rare phenomenon in birds. The observations of nesting behaviour of various species revealed that the following birds practise polygamy: Baya *Ploceus philippinus*, Great Indian Bustard *Ardeotis nigriceps*, Indian Peafowl *Pavo cristatus*, Turkey *Meleagris gallopavo*, Kea *Nestor notabilis*, Satin Bower Bird *Ptilonorhynchus violaceus*, etc. In these bird species a male may mate with two or three or even more females in a season and the females go off to nest without the male and bring up the young (with or without the help of the male). Very strange that towards the end of the Second Millennium these MCPs go scot-free !

Nevertheless, in some bird species the females are hell bent on teaching the MCPs a hard lesson and they merrily practise polyandry ! The well-observed and well-studies are the cases of Common or Bluelegged Bustard-Quail *Turnix suscitator* and the Painted Snipe *Rostratula benghalensis*.

The female Painted Snipe has several husbands. This tropical female is more colourful than the male and has a very attractive plumage. It is a rare phenomenon in the bird-world where the female courts by spreading her

wings and tail feathers and assuming all kinds of curious poses. Once she attracts a male, she unites with the male, moves onto the nest built by him on marshy ground, lays 3-4 eggs and abandons them, leaving the male to incubate the eggs. The male obediently takes charge of hatching and raising the young. Meanwhile, the female snipe looks for another male and repeats the whole process, perhaps several times a year. It appears that Nature has reversed the traditional roles of male and female in this species ! (Ali, 1993. Dorst, 1963).

The Common or Bluelegged Bustard-Quail presents another example of polyandry. In this species the female is larger than the male and more richly coloured: throat and middle of the breast are black. The female Bustard-Quail fights with other females for the possession of a cock, uttering a loud drumming *drr-r-r-r-r-r-r-r* as a challenge to rival hens and also to announce herself to a cock. Once she attracts the cock, mating takes place and she lays 3-4 eggs in a grassland depression in a scrub jungle or crops, often arched over by surrounding grass and leaves them in the custody of the cock to incubate and raise the young. The hen Quail then goes of to acquire yet another husband and this goes on endlessly as the nesting season continues throughout the year (Ali, 1993; Aapte, 1964).

Birds are one step ahead of the *Homo sapiens* ! The Crested Tinamous *Eudromia elegans* - a species inhabiting the Savannahs, the dry grasslands of central and southern Argentina and adjacent Chile - are most interesting birds which practise polygamy and polyandry at the same time.

In the breeding season, each one of the males - who are generally smaller than the females - separately maintains a large territory and makes a nest. The nests are nothing but a depression in the soil beneath a bush. The females move about in small groups and mate successively with different males, laying a few eggs in their nests. Each nest could have anywhere between 4 to 12 eggs, green with a glossy sheen, out of which upto 6 eggs could be contributed by any one female. The male, generally, incubated the eggs and rears the young with little or no help from the female (Short, 1975).

In this article an attempt has been made to draw attention to the existence of polygamy, polyandry and monogamy in various species of birds. The very existence of these phenomena brings up the question why a particular species follows a particular practise: polygamy or polyandry on the one hand and monogamy on the other ? This is a very pertinent issue and needs careful,

elaborate investigation and is closely related to issues like sexual selection, choice of survivally fittest genes, sperm competition, etc..

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APPENDIX

MONOGAMY

- **monogamy,** n. Practise, circumstance, of being married to one at a time; (rare) practise of marrying only once; (zool.) habit of having only one mate (COD, 1972).
- **monogamy,** n. [U] practise or custom of being married to only one person at a time. cf. polygamy (OALD, 1989).
- **monogamy,** n. [U] the custom or practise of having only one wife or husband at one time ... (LDCE, 1989).
- **monogamy,** n. 1. the practise or state of being married to one person at a time. 2. *zool.* the habit of having only one mate at a time..... f. Gk *monogamia* (as mono-, *gamos* marriage) (ORD, 1995).

POLYGAMY

- **polygamous,** a. having more than one wife or (less usu.) husband at once, so **polygamic,** a. ~ist, ~y, nn.; (zool.) having more than one mate; (bot.) bearing some flowers with stamens only, some with pistils only, some with both, on the same or on different plants (Gk *poly* = many, + *gamos* = marrying) (COD, 1972).

- **polygamous,** *adj.* 1. having more than one wife or husband at the same time. 2. having more than one mate. 3. *Bot.* bearing some flowers with stamens only, some with pistils only, some with both, on the same or different plants. = **polygamist** *n.* **polygamously** *adv.* **polygamy** *n.* **polygamic** *adj.* [Gk *polugamos* (as poly + *gamos* marrying)] (ORD, 1995).
- **polygamy,** n [U] custom of having more than one wife at the same time. Cf monogamy (OALD, 1989).
- **polygamy,** n. [U] *tech* the custom or practise of having more than one wife at the same time ..... (LDCE, 1989).

POLYANDRY

- **poly-,** comb. ~adnrist, woman with several husbands or paramours, (bot.) with numerous stamens; ***polyandry,*** plurality of husbands or paramours (COD, 1972).
- **polyandry,** n. [U] *tech* custom of having more than one husband at the same time.... (OALD, 1989).
- **polyandry,** n. [U] *tech* the custom or practise of having more than one husband at the same time.... (LDCE, 1989).
- **polyandry,** n. 1. polygamy in which a woman has more than one husband. 2. *Bot.* the state of having numerous stamens. (Gk poly + *andry* f. Gk *anser andros* male) (ORD, 1995).

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Address for correspondence:
Staff Quarters # 23, CIEFL, Hyderabad 500007.

PIED CRESTED CUCKOO *Clamator jacobinus*

OBITUARY

CAPT. N.S. TYABJI (1913-1996)

Nadir Salahuddin Tyabji was born on 13th July, 1913 in Baroda. He grew up in Burma and returned to India when the Japanese invaded Burma. He played a key role in the evacuation of Indian refugees over the land route. He joined the Royal Indian Navy and volunteered for the Beach Commandos with whom he served for the duration of the War.

He served on in the Indian Navy until 1963 when he retired as Director Naval Operations. In 1963 he joined the Gujarat Refinery as Asst. G.M. and retired in 1971 to settle in Hyderabad. He was the Founder Chairman of WWF-INDIA's Andhra Pradesh State Office in Hyderabad and was a member of the State Wildlife Advisory Board. He was awarded the "Green Mind" award by Prince Phillip on behalf of WWF in 1994 in recognition of his services in the cause of conservation. He was the secretary of the Golconda Society; the Founder President of SPEQL and was associated with many organisations committed to making this city a better place to live in.

Capt. Sahab was associated with the Birdwatcher's Society of Andhra Pradesh since its inception in 1980 and also contributed a paper to its newsletter *Mayura* for the inaugural issue published in 1980, on the nesting of the Baybacked Shrike *Lanius vittatus* in Lodi Gardens, New Delhi. He also hosted a memorable field trip to his beloved little 'Emerald Lake' at the end of road 10 in Banjara Hills. Though in later years, weakening eyesight prevented him from enjoying his birdwatching, his support for the activities of the Society was unstinted.

Capt. Tyabji was deeply concerned about the deterioration of India's various habitats. His foresight insisted on the documentation of the habitat through photography, so that planners and generations to come would realise what our wild countryside really looked like. In the passing away of Capt. Sahab on 13th October 1996, we have lost a man who stood up for the environment on every occassion. Whose integrity was total and exemplary.

Editors

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(Regd No. 1158 of 1983)

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The Society was founded in 1980 with the object of spreading the message of bird conservation. Memebership of the Society is open to persons of either sex and of any nationality, scientific societies, institutions, clubs and companies. Corporate membership is available for persons in their official capacity.

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